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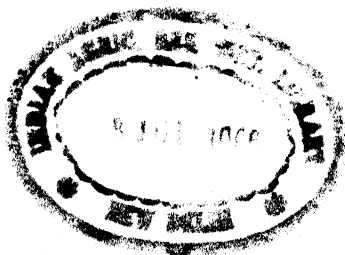
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MONTHLY BULLETIN OF AGRICULTURAL ECONOMICS AND SOCIOLOGY

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No. 1

AGRICULTURAL INDEBTEDNESS (I)

SUMMARY: I. *General survey of the question.* Universal character of indebtedness and its economic and social effects. Its progressive development after the war. Structure of indebtedness. Its causes, old-standing and recent. Its aggravation in consequence of the world economic crisis. Factors determining the persistent fall of prices during the depression, and the principal phases of the depression. Market situation of the more important products. Various aspects of the question of prices. Incapacity of agriculture to adapt its production rapidly to market changes. Fundamental results of agricultural accountancy in relation to the component factors of the cost of production and to agricultural income. Contraction of international trade. Distress of the rural population. Their difficulty in paying debts rendered heavier by the excessive weight of interest. Rates of interest. Consequences of indebtedness felt by the whole community. Numerous sales of land by auction and rapid replacement of entire classes of agricultural producers. Disastrous results of this fact from both the economic and the social point of view. Need for the intervention of the Governments. Classification of the Governments into three main groups according to the policy adopted to meet the situation. Artificial and contingent character of the special relief legislation and necessity for seeking rather a lasting solution of the farmers' difficulties in a stable raising of the level of prices. — II. *Agricultural debts and their adjustment.* Absence or inadequacy, as a rule, of statistics of agricultural debts. Desirability of compiling such statistics methodically by specialised and local inquiries. Study of agricultural indebtedness and the measures adopted for the relief of it in the following countries: A. — Countries of Central and Western Europe (Germany, Belgium, France, Italy, Switzerland). B. — Scandinavian countries and Finland (Denmark, Norway, Sweden, Finland). C. — Countries of East Central Europe (Bulgaria, Greece, Hungary, Poland, Romania, Czechoslovakia, Yugoslavia). D. — Baltic countries (Estonia, Latvia, Lithuania). E. — Asiatic countries (India, Japan). F. — North America (Canada, United States). G. — South American countries (Argentina, Brazil). H. — Australia.

I. — GENERAL SURVEY OF THE QUESTION.

Agricultural indebtedness is one of the most disquieting aspects of the world crisis, owing to its universal character and to the effects, not only economic but social, that it produces. The attention bestowed upon it by the Governments and the many measures taken to attenuate its consequences indicate the anxiety which it has aroused by its rapid increase and by its results. As regards the farms, the principal effect of indebtedness is to render their management more difficult or more lax, while, as regards the credit institutions, it depletes their

(1) Amongst the most general sources of information on the subject, see: THE AGRICULTURAL SITUATION IN 1929-30; Do., 1930-31; Do., 1931-32; THE WORLD AGRICULTURAL SITUATION IN 1932-33; Do., 1933-34; Do., 1934-35. International Institute of Agriculture, Rome. — ANNUAIRE INTERNATIONAL DE LÉGISLATION AGRICOLE, Years 1929 to 1935. International Institute of Agriculture, Rome

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financial resources and thereby renders them partially inoperative precisely at the moment when the farmers have most need of being aided. Lastly, as regards the community, it destroys confidence in the credit system. All this obviously depresses the spirit of initiative and creates a sense of uneasiness, which becomes more and more accentuated as proceedings for forced sale become more numerous, causing an artificial transfer of property from one person to another and consequently disturbing the property market and upsetting the normal distribution of wealth between the social classes.

When this point is reached, the problem of indebtedness, which had its origin in relations governed by private law, assumes a public character and becomes a question of general interest, calling for the intervention of the public authorities, who can no longer refrain from interesting themselves in effects that involve a menace to social and political order.

In recent years, a very striking example of this state of affairs is to be found in the countries of Central and Eastern Europe, which, as they derive the means of their existence mainly from agriculture, have felt very seriously the effects of the crisis. It is precisely by reason of the disquieting conditions prevailing in this part of Europe that the formation was planned in 1931 of the International Mortgage Credit Company, which was mainly intended to facilitate the conversion of onerous debts and thus to lighten the burdens that weigh on agricultural production.

The characteristic feature of European economic life, in the decade immediately following the war, was the extreme rapidity of the reconstruction that took place both in agriculture and in industry. The destruction of farms during the war and their reversion to extensive cultivation at this period left agriculture with a considerable margin for development. On the other hand, the great expansion of capitalist economy and even the exaggerated development of some of its forms, induced agriculture, during its evolution, to have recourse to the means of economic expansion at the disposal of capitalism thereby coming much more under the influence of this system than before the war.

The extension of the capitalist system to agriculture mainly took the form of an important increase in the working capital in relation to the fixed capital and of the recourse to credit in order to form the working capital. Now as long as the working capital belongs to the farmer himself and is not large in relation to the invested capital, the farmer remains able strongly to resist the variations in

— "Credit Conditions and Agricultural Indebtedness in Central European Countries", in DOCUMENTATION FOR THE MONETARY AND ECONOMIC CONFERENCE (LONDON, 1933). International Institute of Agriculture, Rome. — LOUIS TARDY, General Manager of the National Agricultural Credit Bank, Paris: L'endettement des agriculteurs et les mesures propres à faciliter le remboursement des dettes agricoles. Report presented to the 5th International Agricultural Credit Conference, Vienna, 9 to 11 September 1936. — W. W. ROSENBERG: Le problème de l'assainissement des dettes privées. *Revue Economique Internationale*, August 1935, Brussels. — *Le Crédit Agricole*. Bulletin of the International Credit Conferences. — *L'Est Européen Agricole*. Official organ of the Permanent Committee of Economic Studies of the Agricultural States of Central and Eastern Europe.

economic conditions, which no doubt may reduce his resources but cannot upset his financial equilibrium. While in this state, from the capitalist point of view, a farm still retains, to a large extent, its natural character. It is only when the working capital becomes large and is based on credit that the farm takes rather the character of a capitalist undertaking and becomes an organism] extremely sensitive to changes in economic conditions.

As it was, more or less closely, at this point in its evolution, agriculture offered but a feeble resistance to the sudden reversal of the economic situation. It followed that the crisis, which was so acute and so lasting, seriously affected the financial bases of production. The indebtedness of agriculture then began to increase with frightful rapidity.

It must not be imagined, of course, that indebtedness is a recent phenomenon, nor that it is of a simple nature, nor that it is always unhealthy. It is, on the contrary, an old phenomenon which the crisis has rendered more acute and thrown into special relief; it is highly complex, not always resulting from a disequilibrium between receipts and expenses, but sometimes also arising out of the farmer's constructive spirit and desire for improvement; it is a phenomenon the origin of which is influenced by the manners and customs and even the psychology of different peoples.

The causes of indebtedness are therefore manifold: old-standing and recent, general and special to the different countries, healthy and unhealthy.

After the war, a notable cause of indebtedness was the urgent necessity of repairing the damage caused by the devastations of the war to the roads, the bridges, the houses, the soil, the plantations of trees and herbaceous plants, to cultivation in general and to live stock.

It was necessary, in a word, to restore the previous conditions of the cultivation and working of the farms, and this required enormous sums, often obtained by means of loans which are not yet, in certain regions, completely repaid.

Another fact which occasioned a strong demand for credit was the transformation in the distribution of landed property which took place in certain countries in pursuance of agrarian reforms. These reforms resulted in the creation of a considerable number of small landowners, who sought loans in order to pay the expropriation indemnities or to meet the necessary expenses of equipping and cultivating their holdings.

In other countries again, inflation (1), by causing rapid increases in the money value of land and in the prices of products, brought about a rush towards agricultural investments, which required large credits for the speculative purchase of land, thereby appreciably increasing, generally over a long series of years, the burden of debts.

But apart from the reasons for indebtedness above indicated, which are derived from facts more or less directly dependent on the war period, mention

(1) G. NICOTRA: Crise agricole et crédit agricole. *Revue Economique Internationale*, January 1936, Brussels.

must be made of another reason of fundamental importance, inherent in the modern phase of the practice of agriculture, and that is the widespread and gradual process of the specialisation and industrialisation of crops, involving an increasingly large and sometimes very costly application of the principles of agricultural chemistry, of agricultural mechanics, of agricultural electrification and, in general, the more scientific organisation and equipment of the farms. The modernisation of systems of cultivation, of labour, of the transformation and sale of products, and of transport, require more and more abundant capital, which, by the very fact of its volume and the slowness of its reproduction, cannot be built up by the savings that the farmer who utilises it can set aside out of the profits on it, but must be supplied by the savings of the community, entrusted to credit institutions and transformed into capital.

With the onset of the agricultural crisis, accompanied by an unprecedented fall in prices, indebtedness entered upon an acute phase, becoming in certain countries quite intolerable.

To realise the position with some exactitude, it is necessary to bear in mind certain factors that explain the decline of prices. We will consider, by way of example, the typical case of the wheat market, in view of its marked influence on prices and on the economic behaviour of the other principal agricultural products. The following observations are fairly significant:

(a) The area under wheat cultivation in the world (not including the U. S. S. R., China, Persia, Turkey and Iraq), which had been 80,100,000 hectares on the average in the five-year period 1909 to 1913, was 93,200,000 hectares in 1926, 95,500,000 hectares in 1927, 98,800,000 hectares in 1928, 98,000,000 hectares in 1929, 101,700,000 hectares in 1930, 98,700,000 hectares in 1931, 100,400,000 hectares in 1932, 97,000,000 hectares in 1933, 93,800,000 hectares in 1934 and 94,700,000 hectares in 1935, while the production was 828,000,000 quintals on the average in the five-years period and 925,000,000 quintals, 983,000,000 quintals, 1,069,000,000 quintals, 943,000,000 quintals, 1,020,000,000 quintals, 1,009,000,000 quintals, 1,016,000,000 quintals, 993,000,000 quintals, 911,000,000 quintals, and 918,000,000 quintals respectively in the years above indicated.

(b) On the other hand, the net world exports of wheat and of wheat flour (expressed in terms of wheat), which had been 184,000,000 quintals in the period immediately preceding the war (1909-10 to 1913-14), after reaching 223,000,000 quintals in 1926-27, 220,000,000 quintals in 1927-28 and 251,000,000 quintals in 1928-29 fell to 170,000,000 quintals in 1929-30, 223,000,000 quintals in 1930-31, 217,000,000 quintals in 1931-32, 172,000,000 quintals in 1932-33, 149,000,000 quintals in 1933-34, 140,000,000 quintals in 1934-35 and 138,000,000 quintals in 1935-36.

(c) In correspondence with this increase of production and contraction of net imports, the carry-over of wheat at the end of the wheat season rose from 68 millions quintals in 1926 (1 August) to 85 millions in 1927, 104 millions in 1928, 158 millions in 1929, 154 millions in 1930, 171 millions in 1931, 178 millions in 1932, 205 millions in 1933, 191 millions in 1934, 136 millions in 1935 and 105 millions in 1936.

The fall in the prices of wheat (1) that resulted from the glut on the market as well as in those of other principal products, continued alarmingly from 1929 to 1932, but in 1933 some commodities rallied slightly.

In the course of prices since the war three principal phases may be observed (2).

The first is from 1919 to 1921. Prices in 1919 were already very high. In the United States, the index-number reached about 200, representing an increase of about 100 per cent. in relation to the pre-war period. Between 1919 and the middle of 1920 there was again a sudden rise of about 40 per cent. making a total rise of 140 per cent. But this rise was immediately followed by a precipitate fall which, between the middle of 1920 and that of 1921, brought the price index down to about 130, representing a level of prices only 30 per cent. higher than in the pre-war period.

The second phase is from 1922 to 1929. On the whole, judging particularly by the American curve, prices were steady, but they rose and fell slightly in 1925; this rise and fall was, moreover, much more marked on the British curve, in which agricultural products occupy a more important place. In this curve, a revival of prices between 1922 and the beginning of 1925 is clearly indicated; after this, there was a slow but prolonged fall until about the end of 1929.

In October 1929 the third phase—that of the present crisis—began. The slump that took place on the New York Stock Exchange transformed a moderate fall into a veritable collapse of prices. This fall continued, according to the American and British index-numbers of gold prices, until 1933. There was a sort of hesitation in 1934, followed by a slight rally in 1935.

As regards wheat, meat and sugar the same explanation is apparent. While Europe was engaged in the war, the overseas countries developed their production. Towards 1925, when European production had been restored, there was

(1) Manitoba No. 1 wheat at Winnipeg fell from 26.53 gold francs per quintal in the period 1927 to 1929 to 18.01 gold francs in 1930, to 10.76 in 1931, to 9.33 in 1932 and to 8.42 in 1933; thus the price in 1933 was 68.3 per cent. lower than in the period 1927 to 1929. According to statistics recently published by the International Institute of Agriculture it would seem, however, that the world wheat situation is improving. The comparison between the requirements of the importing countries (147,000,000 quintals) and the exportable surplus of the countries that have a production in excess of their own needs, shows that the exportable surplus of wheat of the 1935 crop (105,000,000 quintals) only covers two thirds of the probable world demand. To make up the deficit, it will be necessary to draw to the extent of 42,000,000 quintals upon the exportable stocks carried over from previous crops, which on 1 August 1935, that is, at the beginning of the 1935-36 commercial season, amounted to 100,000,000 quintals. At the end of the season, therefore, the stocks of wheat in the world will be reduced to 58,000,000 quintals and will only slightly exceed the stocks at the end of the 1926-27 season, which amounted to 51,000,000 quintals. The change that has taken place in the world wheat situation will be better appreciated if it is recalled that at the end of the 1932-33 season the world stocks amounted to 169,000,000 quintals.

(2) M. NOGARO: *Les prix agricoles mondiaux et la crise*. Paris, Librairie générale de droit et de jurisprudence, 1936.

depression on the one hand and that of agriculture on the other hand has, in fact, been very striking.

Another aspect of the problem of agricultural prices on which much emphasis has rightly been laid is that of the relation between the prices of agricultural products and the costs of production. After the deflation, in 1920-21, the prices of agricultural products fell rapidly while many of the most important items of the costs of production, such as taxes, social charges, and interest on agricultural loans, were not affected by the deflation. Such items in the costs remained more or less fixed. The results of agricultural accountancy published for a certain number of countries by the International Institute of Agriculture for the years 1927-28 to 1931-32 provide us with very interesting details in this connection. They are contained in the table on the preceding page.

From this table the following observations may be made:

(a) The social income expressed as a percentage of the farming expenses has shown, since 1927-28, a tendency to fall, which has become more marked in the last three years, except in Finland and Poland where, in 1931-32, signs of revival were noted. The index-numbers of the quantities sold do not show the same tendency. In view of the general fall in the prices of agricultural products and also of the wages of persons engaged in agriculture, it must be concluded that the prices of agricultural requisites and the cost of services rendered to agriculture have not varied in the same proportions as the prices of agricultural products but have remained steadier.

(b) The fiscal charges per hectare remained almost constant during the years considered, except in Finland and Estonia, where they were reduced in 1931-32.

(c) The net return, that is, the return on the capital invested in the farm, was declining in all the countries considered during the years 1930-31 and 1931-32, and in some cases became negative.

(d) The equitable remuneration of the work of the family also declined, both on account of the reduction of daily wages and on account of the reduction of the labour employed.

(e) Where the interest on debts burdening the farm is indicated it may be observed that sometimes the income on the farmer's own capital is also negative. This implies not merely that this income is nil, but also that the equitable remuneration of the work of the family is reduced, so that the family must bear the loss of profit and the resulting injury.

(f) Except in Poland, where in 1931-32 they slightly decreased, and in Switzerland where, in the same year, they increased, the interest on debts remained nearly constant during the five-year period considered, from which it may be deduced that the farms were not able to relieve themselves of their debts.

On the other hand, the condition of the peasant farms was aggravated by the fact that a further reduction in the costs of production was difficult to effect, for all the possible economies had already been made. It often happened, therefore, that the taxes and the interest on debts remained unpaid and that the number of cases of distraint and of the forced sale of agricultural properties largely increased.

In his letter on the problem of agricultural debts, presented to Congress in March 1933, the Secretary of Agriculture of the United States says that "many farmers even among those who have no debt and therefore no interest to pay, are nevertheless unable to meet their taxes from this year's income, and can pay them, if at all, only by borrowing money for the purpose, or by drawing on other resources." (1)

The disequilibrium in the general financial situation was accentuated by the fact of the transfer of large capital sums, without any corresponding return in goods or services, for reparations and inter-governmental war debts. These transfers, on the one hand, led to an abnormal accumulation of gold in the principal creditor countries (the United States and France); they caused, on the other hand, a veritable drain of the gold reserves in many debtor countries, and these countries, with a view to defending their currencies and preventing the fall in the gold prices of their products, were obliged, as is well known, to control or to prohibit transactions in foreign bills.

Account must also be taken of the contraction of international trade, which is due to the obstacles of every kind placed in the way of the free circulation of goods. The contraction particularly affected the agricultural countries, which base their economy largely on the export of foodstuffs and was most marked from 1931 onward.

The value of international trade (imports and exports), in comparison with 1929, had fallen by 19 per cent. in 1930, by 42 per cent. in 1931, by 61 per cent. in 1932, by 65 per cent. in 1933, by 66 per cent. in 1934 and by 65.4 per cent. in 1935. It fell from 68,622,000 gold dollars in 1929 to 23,550,000 gold dollars in 1935.

The volume of world trade, expressed as an index-number (1929 = 100) was 93 in 1930, 86 in 1931, 74.5 in 1932, 75.5 in 1933, 78.5 in 1934 and 82 in 1935 (2).

Now it is obvious that agriculture, which by its nature is less adaptable and less capable of resistance, suffered most from the disorganisation and growing economic, commercial and financial stagnation; as a result, agricultural indebtedness steadily increased.

The figures relating to indebtedness that we present in the following pages for certain countries are in some instances astounding and reveal the extremely distressed condition of the rural districts.

It appears from the available figures that there was a decrease of indebtedness during the war and immediately after the war; this decrease was due to the fact that there were fewer applications for loans and that the debtors availed themselves of the depreciation of the currency to free themselves from the burdens that they had assumed. Later, agriculture was particularly affected

(1) **THE FARM DEBT PROBLEM.** Letter from the Secretary of Agriculture, 73rd Congress, 1st Session. House Document, No. 9. Washington, 1933.

(2) **REVIEW OF WORLD TRADE, 1935.** League of Nations. Geneva, 1936.

by the deflation and the stabilisation of the currencies, and indebtedness began largely to increase.

If we study, on the other hand, the structure of the indebtedness, we find that the debts that were contracted during the period of high prices weigh heavily, by the amortisation instalments and by the rates of interest, on the farm budget; that a fairly large part of the debts was incurred for purposes of consumption or, at any rate, for non-productive purposes; the farms having been worked at a loss, the farmers were often compelled to use the money borrowed for household expenses. In such cases repayment became very problematical.

In regard to the rates of interest, a distinction must be made between loans contracted in the sphere of organised credit and loans contracted on the free market. In the first case, either as a result of the spontaneous initiative of the banks or through the intervention of the public authorities, there may be noted, in recent years, a mitigation of the rates, which however still remain disproportionate to the actual return on the farms, and this contributes to aggravating the burden of the debts. In the case of loans contracted on the free market, on the contrary, the rate of interest usually remains high and is often usurious. This occurs most frequently when there is a scarcity of capital in the banks and borrowers are compelled to resort to private individuals to obtain the funds they require. Debts to private individuals, being usually contracted on onerous terms, without the possibilities of control that exist in the field of organised credit, are the most disquietening form of indebtedness.

The co-operative organisations contribute effectively to the struggle against usury. With reference to these organisations, attention must be specially drawn to the growing tendency on the part of credit institutions to rely upon such organisations for the distribution of loans. Taking the view that agricultural credit supplied through the medium of co-operative societies most surely reaches its proper destination, the banks endeavour to collaborate more and more closely with such organisations. The number of loans granted through the medium of co-operative societies is, in fact, everywhere increasing.

In regard to the rates of interest, it seems essential to establish a better balance between the interest that the banks receive from the borrowers and the interest that they pay to those who supply them with capital. It frequently happens that the competition between the banks to attract depositors leads to a raising of the interest they pay and this, in turn, makes it necessary to increase the interest charged to borrowers. Certain Governments have become alarmed by this tendency and have fixed maximum rates of interest.

But whatever may be the general or specific causes of indebtedness, whatever may have been the mistakes of the debtors who in the period of prosperity have assumed excessive burdens without due consideration, acting as though the tendency of prices to rise would continue indefinitely, whatever mistakes may have been made by the creditors themselves in being at times too ready to grant loans, all are agreed that excessive indebtedness is a common and general evil; it is injurious at the same time to the debtors and the creditors and its effects are felt by the whole community. It does not, at the present time, occur merely in

isolated instances; it is a widespread phenomenon, affecting large numbers of persons, and one of its most alarming and depressing effects, as we have already noted, is seen in the sales of property by auction; this brings about the collapse of the prices of land, causing widespread ruin and disturbance. If we consider the consequences, not only economic but psychological and social, of this fact, and the costs and sacrifices involved in the sudden replacing of entire classes of producers, we shall readily understand the necessity of special measures to deal with this distressing situation.

The cost of the replacements of which we have just spoken cannot, certainly, be estimated merely from the material point of view. It must never be forgotten, in fact, that the farmer is attached to his land and to his vocation by bonds much stronger and more solid than the manufacturer or merchant; that farming is not only an occupation for him, but also a traditional mode of living, and that the state of mind of the farmer dispossessed of his land forcibly or by speculative scheming is socially dangerous. A crisis of confidence is thereby brought about. The dispossession on a large scale of landowners risks moreover compromising irreparably the consolidation (1) of that great movement of agrarian reform which since the war has been the central aim of the policy of many countries and has remodelled their structure and economic life.

All that we have said serves to indicate the complexity of the phenomenon with which we are dealing, as well as the diversity of its structure and of its importance according to the special conditions of the different countries. The policy of the Governments and the legislation on the subject are inspired by this diversity of conditions, but underlying them all there is a common principle—that of calling upon the community to participate in the adjustment of a situation the origins of which must be sought in the upheaval that occurred after the war in the general system of distribution and consumption, the consequences of which cannot be borne exclusively by the rural population but must be shared between all classes of society; it is the principle of collective responsibility that comes into play, a principle which, moreover, has been applied in many different fields in recent years, its application being imposed by a sense of equity.

We cannot here enter into the details of the solutions adopted by different Governments for the problem of agricultural debts; the reader will find these details in the special part of this study dealing with the different countries. It must suffice to note that the States can be roughly grouped, from the point of view that concerns us, into three principal classes (2).

The first class includes those States that have taken radical measures aiming directly at relieving the farmers from the burden of their debts. The second is formed by States that have, it is true, pursued a policy of direct intervention in regard to the problem of agricultural debts, but have confined their measures

(1) NALLO MAZZOCCHI-ALEMANNI: I debiti dell'agricoltura. Atti della Reale Accademia dei Georgofili, 30 June 1932, Florence.

(2) GIACOMO ACERBO: Il problema dell'indebitamento dell'agricoltura nei vari paesi. *Nuova Antologia*, 16 March 1933. Rome.

within narrower limits, endeavouring to relieve the debtors without, however, seriously affecting the interests of the creditors. The third class includes those States that have sought to help the debtors mainly by indirect means, or by a general policy of strengthening and protecting agricultural economy, but without violating the principle of respect for obligations incurred.

The first type of policy and of legislation prevails in certain countries of Central and Eastern Europe. It is characterised by the compulsory conversion of the farmers' debts, a reduction of the rate of interest and sometimes even of the capital sum due being imposed by law.

The second type of policy and of legislation which in certain countries is distinct from the first and, in others, is associated with it, takes the form of a series of measures providing for the repayment of the loans by instalments over a series of years, the suspension of measures of distraint against the debtors, the bringing about, through special procedure, of direct arrangements between debtors and creditors, the repayment by the State of part of the debts, the imposition of minimum prices for the sale of expropriated property, and so on.

Lastly, the third type of policy and legislation is generally adopted by States with a more highly organised economic structure; they endeavour to avoid, as far as possible, any intervention of the public authorities to modify compulsorily the terms and conditions of the legal obligations arising out of the financing of farms, and rather to relieve agriculture from the burden of excessive indebtedness by general action to support and improve agricultural economy.

It is needless to say that the plans for the adjustment of debts have involved the Governments in financial operations, often on a large scale.

To give a faithful account of the situation, we must note that the radical measures adopted in certain countries (compulsory reduction of the rate of interest and of the capital sums due, application of a moratorium) have usually had results contrary to what was hoped from them, as they made it impossible for the financial institutions to meet their engagements to their depositors and the persons who provide them with capital. There resulted a contraction of the operations of the credit institutions, which were obliged to refrain from undertaking new credit transactions or to restrict such transactions. It is hardly necessary to recall that present-day economy is based on credit and, accordingly, that whatever is likely to disturb the delicate mechanism by which savings are transformed into capital and, as such, flow into productive investments, is to be firmly rejected.

The fact is that wherever energetic measures have been taken, the persons who have been called upon to make sacrifices, and public opinion in general, have strongly reacted, and violent disputes have often broken out, rendering necessary the adoption by the public authorities of new measures in order to calm the people.

The regrettable results of this form of direct public interference in relations arising out of private law, however justified it may have been by the force of circumstances, have shown the desirability of having recourse rather to measures that respect contractual obligations and protect the distressed debtors without too greatly sacrificing the creditors, such as the repayment of the debt by instalments over a series of years, contribution by the State towards the payment of

interest, etc. And, generally speaking, it seems to be preferable to encourage voluntary arrangements between debtors and creditors, as has been done in several countries, by means, for example, of the supervised working of indebted properties, of the setting up of systems of mediation, conciliation, arbitration, arrangements with creditors, etc.

The formation of special institutions for supplying credit based on the security of movable property has also been contemplated. The aim of these institutions would be to eliminate or to attenuate the very dangerous material and social effects of the sale of lands by auction at disastrously low prices and of the hateful speculations which result.

Turning again to the question of rates of interest, it would seem to be necessary to aim, as far as possible, at reducing the cost of money, in order to meet the new situation brought about by the crisis. There exists, no doubt, great disparity between the conditions in the different countries in this respect, and difficulties of very different character have to be overcome in attaining the aim above-mentioned. International financial agreements might usefully be considered with a view to lessening the disparity of which we have just spoken. It is certain that even in the interior of a country, very different criteria are often adopted in applying rates of interest to a single branch of production. It ought not to be difficult to ascertain the causes of these differences and perhaps to eliminate them, particularly those that give rise to usury.

It must not be overlooked, moreover, that the legislation for the adjustment of agricultural debts, though one of the most highly developed parts of the measures taken on behalf of agriculture by the States in recent years, is entirely sporadic and, as such, does not usually possess that organic character which in all legislation is indispensable to ensure that it shall be logical and equitable. It consists of temporary and partial expedients which endeavour to regulate in the same way very different cases and give the impression that the remedy is worse than the disease. It is essential, on the contrary, to go to the root of the evil, which is, in fact, the insufficiently remunerative level of the prices of products. Every system, therefore, calculated to balance these prices seems better to meet the requirements of the case. In answer to this it may be said that this solution is more easy to propose than to carry out and that in carrying it out there is risk of falling into that artificiality that has so often been condemned and that would again bring about a precarious situation. Nevertheless we are of opinion that particularly by perfecting the methods of distributing and transporting products it would be possible to assure to the producers an adequate margin of profit. In intermediary trade there are still possibilities of taking action for the benefit of the farmers.

The solution of the problem of agricultural indebtedness by the raising of prices has been effectively supported by the Swiss Peasants' Secretariate. After a careful study of the conditions of Switzerland, the Secretariate has asserted that to judge of the question of indebtedness in its entirety it is indispensable to compare the effects of a reduction of the debts—or, which comes to the same thing, of the interest—with the effects of measures taken with a view to raising prices, or, in other words, of enlarging the margin between the costs of production and the gross return. It appears from a grouping of account-

any results by classes of indebtedness carried out by the Secretariate that, taking the average for all farms, a total rise of 5 per cent. in the general level of prices, that is, a rise of 1 centime per kilogramme of milk, of 6 centimes per kilogramme live weight for slaughter cattle, and of 7 centimes for pigs, would, of itself, improve the situation more than if the rate of interest remaining the same as it now is, the farmer whose indebtedness amounted on the average to 4,000 francs per hectare, were relieved of the payment of interest on 1,000 francs per hectare. For small farms, moreover, it is noted that it is even only when the indebtedness exceeds 7,000 francs that a reduction of 25 per cent. in the rate of interest would give more efficacious relief than a rise in prices of 5 per cent. On the other hand, in the case of large properties this is possible even when the indebtedness is between 2,000 and 3,000 francs. Thus a general reduction of interest in the proportion of 25 or even 50 per cent. would, above all, be in favour of the large estates.

The Swiss Peasants' Secretariate arrives at the conclusion that the removal of indebtedness cannot help agriculture, considered as a whole, if the relation between the cost of all the means of production and the prices of agricultural products is not, at the same time, improved.

The idea that has just been put forward is shared by the Governments of many of the countries that have suffered most from indebtedness and that have rightly endeavoured, as we shall see in the second chapter of this study, to carry out programmes for the general adjustment of the national agricultural economy. Thus, for example, in Romania, a typical country in respect of the difficulties caused by indebtedness, it has been recognised " that with a better organisation of production, agriculture would have been able to dispense with the intervention of the State, thus avoiding the experience of exceptional legislation and that this policy of the relief of indebtedness will be more strongly supported by effective organisation and the improvement of agricultural technique." In the same way, in Yugoslavia, the Minister of Agriculture declared recently that the total remission of debts would not be in the interest of the farmers themselves; that what is essential is to raise the prices of agricultural products, which would enable them to pay their debts and to live a less hard life, and that if their debts were entirely remitted it would destroy what little credit the peasants still possess.

The fact that in 1935 and in 1936 agricultural prices, in a certain number of countries, showed a tendency to rise, does not relieve the anxiety aroused by the heavy indebtedness of the rural classes, for there is no means of determining with precision for the moment (1) the extent to which the general improvement of agricultural prices, slight as it is, is due to natural causes or how far it is the result of artificial stimulants, such as subsidies, protective tariffs and restrictions on production. In the majority of countries the immense disparity that existed at the height of the crisis between the prices of

(1) INTERNATIONAL LABOUR CONFERENCE. Twentieth Session. Geneva, 1936. Report of the Director. Geneva, International Labour Office, 1936.

agricultural products and those of manufactured goods has not yet disappeared. It is true that considerable progress has been made in this direction, but it is to be noted that the farmer, by reason of the difficulty that he experiences in reducing his production in order to adapt it to the contraction of the market, usually remains at a serious disadvantage, in spite of all the exceptional measures that have been taken to protect, to support and to aid him. It would seem that we are still far from having restored to agricultural production the benefit of prices sufficiently high to assure the prosperity of the rural population.

Moreover, a glance at the following pages, which deal with the special situation of the different countries in respect of their indebtedness, will suffice to show that the adjustment of this situation requires a concerted and systematic effort on the part of the Governments and of the farmers themselves with the object of obtaining concrete and durable results capable of gradually eliminating a factor in the financial situation of agriculture that is particularly serious because it retards the progress of agriculture thereby causing great injury to the community.

II. — AGRICULTURAL DEBTS AND THEIR ADJUSTMENT.

Statistics of agricultural indebtedness either do not exist at all—and this is most frequently the case—or are incomplete or defective. In certain countries special inquiries have been undertaken on the subject of agricultural indebtedness. In other countries, little has been done, as a rule, beyond making estimates on the basis of conjectures and indirect indications. It is certain, on the other hand, that the compilation of statistics of agricultural debts that would enable comparisons to be made between the different countries would be of the highest interest. We must not, however, overlook the difficulties of method and other practical difficulties that stand in the way of such an undertaking. It must not be forgotten that while for part of the debts (mortgage debts) there exist sources from which statistics can readily be compiled, this is not true even for debts contracted with banks in the form of bills, whilst it is almost impossible to obtain statistics of debts on note of hand contracted with individuals.

In any case, if such statistics were compiled, they would only be useful if they were specialised and local; aggregate and general studies would not be satisfactory; moreover, to form a precise idea of the burden of debts and to make comparisons, it is not sufficient to compile statistics of indebtedness in terms of capital, but it is essential to know the importance of the indebtedness in relation to the return from the farms. It is, in fact, notorious that these two factors hardly ever are in proportional relations with one another; least of all in periods of crisis and monetary disturbance.

Consequently, in view of the present inadequacy of the statistics of agricultural debts, we can only, in the present study, put forward such figures as we have been able to collect regarding the different countries, and though

we have taken every precaution, we cannot, however, take full responsibility for the accuracy of these figures. Nevertheless, we consider that they sufficiently represent the financial situation of the farmers (1).

A. — COUNTRIES OF CENTRAL AND WESTERN EUROPE.

Germany.

The indebtedness of agriculture is systematically studied by the Institute for the Study of Economic Fluctuations (*Institut für Konjunkturforschung*). On the basis of the figures resulting from these studies the following table has been drawn up (2):—

Kinds of credit	At the end of the year				
	1928	1929	1930	1931	1932
Millions of reichsmarks					
Indebtedness that can be calculated:					
Credit on the security of real property	3,623	4,117	4,350	4,485	4,351
Medium-term credit	318	360	297	257	237
Short-term credit	2,890	2,865	3,133	3,173	2,987
Total . . .	6,831	7,342	7,780	7,915	7,575
Indebtedness that cannot be precisely calculated	4,000	4,050	3,850	3,850	3,850
Total indebtedness	10,831	11,392	11,630	11,765	11,425

According to further studies made by the same Institute, the aggregate indebtedness of German agriculture amounted, on 1 July 1933, to 11,800,000,000 reichsmarks; on 1 July 1934 to 11,600,000,000 reichsmarks, on 1 July 1935 to 11,300,000,000-11,400,000,000 and on 1 July 1936 to 11,000,000,000 reichsmarks, whence it appears that the situation has steadily improved.

The annual interest charge on the total debts declined in 1933-34, as compared with 1932-33 by more than 10 per cent.; more than half this decline was in respect of debts on personal security. A further decrease, also of 10

(1) On the methodology of statistics of agricultural indebtedness see, amongst others, the following publications: J. PIEKALKIEWICZ: *Statistique du crédit hypothécaire*. Report presented to the 21st Session of the International Institute of Statistics, Mexico, 1933. La Haye, 1933. — R. FREUND: *National Statistics on Farmers' Indebtedness*. The United States Census and a New Swedish Inquiry. *Monthly Bulletin of Agricultural Economics and Sociology*, No. 10, October 1936. Rome, International Institute of Agriculture. — NALLO MAZZOCCHI-ALEMANNI: *I debiti dell'agricoltura*. Atti della Reale Accademia dei Georgofili, 30 June 1932, Florence.

(2) *Wochenbericht des Instituts für Konjunkturforschung*, No. 27. Berlin, 4 October 1933.

per cent., occurred in the year 1934-35, as compared with the preceding year. This difference must be attributed to the improvement in the general economic condition of Germany, which enables the farmers to set about the repayment of their debts, as well as to the effects of the measures for the relief of indebtedness, of the *Osthilfe* and of the law for the adjustment of debts, and also to the considerable reduction of the rate of interest on mortgage debts. In comparison with the maximum level recorded in the year 1931-32 (1,000,000,000 reichsmarks) the interest charge was reduced by more than a third. It has been estimated, for the year 1934-35, at 650,000,000 RM.

To obtain an idea of the relation between the indebtedness and the return of agriculture, it is useful to consult the following statement, whence may be seen the movement of the interest charge and of the receipts from the sale of products, as well as the relation between these two factors. In 1931-32, which was the most unfavourable year, the interest charge absorbed 13.6 per cent. of the receipt from sales. In 1933-34 this percentage was less than 10 per cent., a decrease of 27 per cent. in comparison with the percentage in the year 1931-32 (1). A further and remarkable decline took place in 1934-35.

Economic year	Interest charge	Receipts from sales	Interest charge as percentage of receipts from sales
	Millions of reichsmarks		
1925-26	610	8,100	7.5
1926-27	630	8,300	7.6
1927-28	790	9,300	8.5
1928-29	920	10,200	9.0
1929-30	950	9,800	9.7
1930-31	950	8,600	11.0
1931-32	1,010	7,400	13.6
1932-33	850	6,400	13.3
1933-34	(1) 730	(2) 7,500	9.7
1934-35	610	8,300	7.3

(1) Estimate on the basis of the *Wochenbericht* cited. — (2) Provisional figure.

The general index of the prices of agricultural products placed on sale was about 20 per cent. higher in 1934-35 than the level of 1932-33. Side by side with this upward movement of prices, the increase in the volume of sales appreciably added to (2) the receipts from the sales of agricultural products. In

(1) Publication cited, No. 22-23, 5 June 1935, and No. 43, 25 January 1923.

(2) THE WORLD AGRICULTURAL SITUATION IN 1934-35. Economic Commentary on the International Yearbook of Agricultural Statistics, 1934-35. International Institute of Agriculture, Rome, 1936

fact, during the economic year 1934-35, the cash receipts of agriculture from the sale of products amounted, according to the provisional estimate of the *Institut für Konjunkturforschung*, to about 8,200,000,000 RM., being about 10 per cent. higher than those of 1933-34 and about 30 per cent. higher than those of 1932-1933.

The excess of the receipts from sales over the farming expenses was, according to provisional estimates, about 3,000,000,000 RM. in 1934-35, as compared with 2,500,000,000 RM. and 1,500,000,000 RM. in the two preceding years and approximately 3,000,000,000 RM. in 1928-29.

As regards more particularly the present state and structure of indebtedness, a recent enquiry carried out by the *Deutsche Rentenbank-Kreditanstalt* (1) furnishes important information. The inquiry extends to the whole of Germany and embraces farms of all sizes beginning with those containing between 2 and 7.5 hectares of cultivated area. The indebtedness conditions of 12,053 farms were studied, as compared with between 4,000 and 5,000 in previous years.

In view of the importance of the *Erbhöfe* (2) in German agricultural economy and of the Law of 20 June 1936 on the relief of the indebtedness of this class of rural property, the enquiry in question devoted special attention to the problem of credit for the *Erbhöfe* and for the relief of their indebtedness. Instead of classifying the properties according to size, as in the past, the enquiry took the *Erbhof* as basis, drawing a line of demarcation between the properties of larger area (over 125 hectares) and those of smaller area (under 7.50 hectares). According to the statistics obtained regarding indebtedness and the amount of interest payable for farms in general, it has been possible to ascertain that the decrease of the indebtedness for the year 1934-35 has been taking place mainly in the farms of larger area than that of the *Erbhöfe*. Besides the *Osthilfe*, another factor has contributed to this improvement, namely, the greater dependence on the markets of these farms which have been favourably influenced by the Law on the regulation of markets.

The following figures, extracted from the report of the enquiry, will give an idea of the decrease of agricultural indebtedness in regard to the *Erbhöfe* and to agricultural properties in general.

(1) DIE KREDITLAGE DER DEUTSCHEN LANDWIRTSCHAFT IM WIRTSCHAFTSJAHRE 1934-35. Deutsche Rentenbank-Kreditanstalt. Verlag für Sozialpolitik, Wirtschaft und Statistik, Berlin, 1936.

(2) By *Erbhof*, as defined in the Law of 29 September on hereditary peasant property, is understood any farm or forestry undertaking of an area which cannot be smaller than the area required to supply the needs of the owner and of his family (*Ackernahrung*), generally of a minimum of 7 ½ hectares and of a maximum of 125 hectares of land exploited as a unit. It must form the property of a person who has the requisite qualities for operating a farm (*bauernfähige Person*) and offering the guarantees of origin and character required by the legislation on the *Erbhöfe*; such persons alone have henceforward in Germany the right to call themselves *Bauern*. Farms that are always let cannot be declared hereditary peasant property. According to the Law the *Erbhof* cannot, in principle, be charged, nor alienated, nor be made the subject of any executive action.

The average indebtedness of all the farms amounted, on 1 July 1935, to 650 RM. per hectare, including the income charges and the reserve fund for the maintenance for life of relatives who have reached a certain age.

In South-west and North-west Germany the average indebtedness per hectare of the *Erbhöfe* is below this average (468 to 552 RM.), whilst in Central and East Germany the average is not much greater (702 and 737 RM. per hectare). In East Germany the indebtedness of agricultural properties in general is smaller by 112 RM. per hectare than that of the *Erbhöfe*; in Central Germany, agricultural properties in general show an indebtedness larger by 50 RM. than that of the *Erbhöfe*. In relation to the taxable value per unit of area, the indebtedness of agriculture is highest in the East, amounting to 80 per cent. for the *Erbhöfe* and to 69 per cent. for agricultural properties in general. In the other regions the indebtedness varies from 34 to 45 per cent. of the taxable value per unit of area, without any appreciable difference between the *Erbhöfe* and the other properties. On the other hand, in the East the somewhat unfavourable conditions of agriculture are shown by the distribution of the indebtedness: while in the rest of Germany indebtedness exceeding 60 per cent. of the taxable value per unit of area was found in 16.50 per cent. of all the farms (*Erbhöfe* and others), in the east, on the contrary, 33 per cent. of the agricultural properties in general and 30 per cent. of the *Erbhöfe* exceeded this limit; and even 41 per cent. of the *Erbhöfe* were indebted to the extent of more than 100 per cent. of the taxable value.

To sum up, it may be said that, in general, the indebtedness of the *Erbhöfe* is on the average slightly lower (6.25 per cent.) than the indebtedness of agricultural properties in general; on the other hand, in the East it is higher (18 per cent.). As we have already said, in this part of Germany, the influence of the measures for the regulation of the markets has been more strongly felt by the large properties than by the *Erbhöfe*.

Numerous measures have been taken with a view to relieving the indebtedness of agriculture. As early as 1929, a law, dated 18 May of that year, on economic aid to be given to East Prussia contemplated, amongst other measures, the conversion of debts, but this provision was later embraced within the general action taken in aid of the Eastern part of the country (*Osthilfe*). In fact, the Law of 31 March 1931 (*Osthilfegesetz*) contemplated, in addition to other measures of assistance to the distressed districts of the Eastern region, the extension to the relief of agricultural indebtedness of the general plan for the conversion of debts and its application to all the territory to the East of the Elbe, excluding Sleswig-Holstein. This law was completed in the course of 1931 and 1932, by numerous legislative measures rendered necessary by the aggravation of the crisis. In the measures for the relief of indebtedness contemplated by the *Osthilfe* the floating debts of a needy farmer who deserved to benefit by the measures of assistance were replaced by a special loan granted by the Bank for German Industrial Securities (*Bank für deutsche Industrieobligationen*). The necessary resources for the relief of indebtedness contemplated by the *Osthilfe*, amounting to a total of 600,000,000 RM., were drawn to a large extent from a fund formed by levies imposed on industry (*Aufbringungsumlage*). The Reich guarantees up to 25 per cent. of the loan granted under the conditions indicated, in the event of the non-

payment of the mortgage loans created in relieving the indebtedness. In the autumn of 1931, the agricultural depression of Eastern Germany became accentuated to such an extent that it was necessary, by effective measures, not only to ensure the carrying out of the measures for the relief of indebtedness, but also to safeguard the crop of 1932. The Order of 17 November 1931 (*Sicherungsverordnung*) set up in favour of agricultural debtors a protection against distraint by creditors, and contemplated further the possibility of a compulsory reduction of the capital sums due to the creditors. The opening of such proceedings, which might be applied for up to 31 December 1931, had the effect of rendering it inadmissible to levy distress on the farmer in respect of claims for the repayment of capital or to require the handing over of implements or other equipment or the products of lands forming part of the farm. The protection in question extends to all the property of the debtor. The proceedings for protection are applicable to all creditors, whether they have supplied personal credit or credit on the security of real property, who, at the moment of the opening of the proceedings, have a claim on the possessions of the debtor. In all proceedings for the relief of indebtedness, efforts must first of all be made to arrive at a voluntary arrangement between the farmer and his creditors. If such an arrangement is not possible, a plan of relief is drawn up which involves the compulsory concession of delays in payment, the remission of arrears of interest, the reduction of rates of interest and even the compulsory reduction of the principal by not more than 50 per cent.

The distressed condition of agriculture spread beyond the Eastern region. Several special measures, such as the Orders of 8 December 1931 and of 27 September 1932 on the reduction of interest, the measures preventing distraint, as well as the Order of 27 September 1932 regarding the procedure for agricultural mediation, did not succeed in preventing the forced sale of a constantly increasing number of farms.

The National-socialist Government, on coming to power at the beginning of 1933 realised at once the urgency of proceeding to the radical readjustment of agricultural economy and adopted for this purpose measures of fundamental importance. In order to allow an immediate respite to the farmers in difficulties, a large measure of protection against distraint was introduced by the Order of 14 February 1933. But it was a law dated 1 June 1933 (*Schuldregulierungsgesetz*) (1) which provided in an organic fashion for the settlement of agricultural debts.

This law gives to every owner of a farm, forestry undertaking or market-garden, who cannot free himself from his debts by his own means, the possibility of applying to the competent court (*Entschuldungsamt*) to initiate proceedings for the relief of indebtedness. In these proceedings the bases must be laid down for a gradual reduction of the indebtedness until it comes within the limits of the guarantee required for the protection of the property of minors (*Mündelsicherheitsgrenze*), that is to say, two-thirds of the value of the property.

(1) *Reichsgesetzblatt*, Part I, No. 61 (3 June 1933). "Textes législatifs" published by the International Institute of Agriculture, 1933 series, No. 13.

If there is no reason for rejecting the application, the court opens the proceedings for the relief of indebtedness and names the office that will be charged with carrying it out (*Entschuldungsstelle*). As such may be named a State credit institution or other public institution or institution subject to the supervision of the State.

The relief of indebtedness may be carried out:

- (a) by the adjustment or redemption of the debts;
- (b) by a transfer of land;
- (c) by combining adjustment with redemption and transfer.

If the office charged with the relief of indebtedness considers that it can be carried out, it will draw up a plan of relief and submit it to the court for ratification. On the other hand, if it is of opinion that the relief of indebtedness can only be carried out by means of a compulsory agreement, it will ask the court, with the consent of the indebted farmer, to authorise it to conclude the agreement with the majority of the creditors.

The regulation of the debts consists mainly in the reduction of the interest to a rate of 4 $\frac{1}{2}$ per cent., and in the transformation of the credits into conversion credits that cannot be called in. Whenever it is possible, the relief of indebtedness must be carried out without having recourse to judicial arrangement. When recourse is had to proceedings for a judicial arrangement, it is possible to reduce to 50 per cent. all the credits that do not offer the guarantees required for the investment of trust funds. The transfer of land forming part of the property to be adjusted must be carried out at prices corresponding to the conditions of average profitability. Properties which have been relieved of indebtedness under the terms of this law are subjected, also in the future, to special legal restrictions. They may only be burdened with debts on real security within the limits of the guarantees required for the investment of trust funds. The value of the property in excess of this security is burdened by a fictitious mortgage in favour of the *Deutsche Rentenbank-Kreditanstalt*. The owner of the farm cannot contract new debts on the security of this margin without the authorisation of this bank, whence it results in practice that the bank retains control over the farm.

The application of the measures regarding adjustment proceedings, particularly those making it possible to reduce debts on first mortgage in so far as they exceed the limit of the guarantee required for the investment of trust funds, necessitated also certain measures for the protection of mortgage credit institutions. The law consequently lays down that the Reich shall deliver credit certificates bearing interest at 4 $\frac{1}{2}$ per cent. to the mortgage credit institutions which have issued bonds guaranteed by agricultural mortgages, by mortgage debts, by debts contracted for the payment of charges on real property, and that the same must be done in favour of institutions charged with compulsory State insurance, to the extent to which their financial cover is injured by the measures for the relief of indebtedness.

A lasting adjustment of about 625,000 *Erbhöfe* subject, according to a provisional estimate, to the new German law on succession (*Reichserbhofgesetz*)

of 29 September 1933 (I) and comprising a total area of nearly 14,250,000 hectares, is assured by the prohibition of placing charges on the *Erbhöfe*. That is to say that charges can only be placed on an *Erbhof* for important reasons and with the approval of the succession court (*Anerbengericht*).

The same law further prohibits imposing new debts on the *Erbhöfe* in case of inheritance. In the succession, the *Erbhof* passes undivided to one person (the heir). The law recognises to the descendants of the farmer testator who do not share in the inheritance, as well as to the widow of the testator, the right to recover in kind or in cash what they require for their establishment and maintenance. The charges burdening the succession (including the mortgage debts and the debts contracted for the payment of charges on the property, but not including other charges such as supply of food and lodging by the heir to the occupier who preceded him, usufruct, charges arising out of the relief of indebtedness and so on) must be met as far as possible out of the fortune other than the landed property.

In consequence of these restrictions, no new indebtedness can be formed as a result of the succession that the *Erbhof* cannot support. In cases where other property is included in the inheritance besides the *Erbhof*, account will be taken of such property in order to reduce the charges on the *Erbhof*.

Proceedings for the relief of indebtedness relating to farms of a taxable value per unit of area (*Einheitswert*) lower than 10,000 RM. (small farms) and to leased farms are regulated in a special manner for the reason that there exist, in both cases, special conditions.

But, apart from all these measures of agricultural adjustment, the reduction of debts will follow as a natural consequence of the agricultural policy of the new Government of the Reich, which has, amongst other aims, that of raising to a remunerative level the prices of agricultural products which, in part, had remained appreciably below the cost of production.

Belgium.

For Belgium two sources of information regarding statistics of farmers' indebtedness are available:

(1) The outstanding sums due by borrowers to the *comptoirs agricoles* (semi-official credit institutions);

(2) The outstanding sums due by borrowers to the *Raffeißen* banks.

By way of indication we give on the opposite page a statement of these outstanding sums at the end of each year from 1929 to 1934 (in Belgian francs).

It need hardly be said that these figures only give a fragmentary indication of the indebtedness of Belgian agriculture. It is absolutely impossible to say

(1) *Reichsgesetzblatt*, Part I, p. 685. — I. Order for Carrying out the Law, 19 October 1933. *Ibid.*, p. 749. — II. Order for Carrying out the Law, 19 December 1933. *Ibid.*, p. 1096. — III. Order for Carrying out the Law, 27 April 1934. *Ibid.*, p. 349.

	Comptoirs agricoles	Raiffeisen banks	Total
1929	181,060,819	361,430,392	542,491,211
1930	218,516,306	351,728,042	570,244,348
1931	275,218,194	334,584,465	609,802,659
1932	331,748,319	301,715,370	633,463,689
1933	362,250,237	273,417,506	635,667,743
1934	382,313,454	240,714,075	623,027,529

what fraction of the total the sums indicated represent. In fact, many loans are granted by private persons through the medium of a notary, and no statistics exist from which it would be possible to estimate the percentage of the total mortgage debts in any year that may be regarded as agricultural debts.

As regards the measures taken to facilitate the repayment of debts, the following measures, taken in consequence of the crisis, may be mentioned:

(1) The mortgage moratorium, set up by the Law of 27 July 1934. This law authorises the mortgage debtor, who is distressed but is acting in good faith, to ask for conditions and postponements, provided that his loan agreement was made prior to 1 July 1934.

(2) The Decree-Law of 22 August 1934, modifying the legal provisions regarding registration, mortgages, stamps and fees and similar matters. Under the terms of this decree it is possible to make a transfer of credit without expenses; this measure indirectly facilitates the reduction of interest.

(3) Decree-Law No. 7, of 22 August 1934, regarding the anticipated repayment of money loans; every money loan bearing interest, granted before the decree came into force, whatever may be the security promised or furnished, can, up to 1 July 1936, notwithstanding any agreement to the contrary, be repaid by the debtor before the date of repayment agreed upon.

(4) Decree-Law No. 74, of 28 January 1935, regarding the reduction of interest on mortgage credits and privileged credits. This Decree lays down a maximum rate of interest of 6 per cent. to which existing rates must be reduced.

The measures are generally applicable and were not taken solely on behalf of agriculture.

The farmers have been able to take advantage of these measures but as a general rule it cannot be said that their indebtedness was of such a nature as to render Government intervention necessary to relieve a critical situation (1).

(1) From a communication received from the Central Rural Credit Bank of the *Boerenbond* belge. Louvain, 1936.

France.

According to estimates made by the National Agricultural Credit Bank (1), French agricultural indebtedness amounted in September 1936 to 9,500,000,000 francs. It could be classified as follows:

	Francs
Loans granted by official agricultural credit institutions	3,500,000,000
Loans granted by the Crédit foncier	2,000,000,000
Agricultural loans granted by the Bank of France	500,000,000
Private mortgage debts or loans obtained through a notary on mortgage security	3,000,000,000
Loans granted by the Durand rural banks.	500,000,000
Total	<u>9,500,000,000</u>

The amount of the usurious loans, which it is impossible to determine even approximately, is not included in this total. In like manner, the mortgage loans granted by insurance companies or private companies cannot be estimated.

However, speaking generally, French agricultural indebtedness is not heavy. In particular, the amount of the agricultural debts, in relation to the value of rural property, is relatively small. In fact, the capital value of the land and buildings (not including the working capital: implements, live stock, etc.) has been estimated by one expert at 170,000,000,000 francs and by another at 210,000,000,000 francs. Thus, even if the known part of the French agricultural debt only amounted to 50 per cent. of the total debt, the indebtedness would be less than 10 per cent. of the value of rural property.

As to the measures taken to reduce agricultural indebtedness they consist mainly in the granting of postponement of repayment to the various classes of debtors.

The Decree Law of 28 September 1935 regarding loans granted by mutual agricultural credit societies extended from 10 to 15 years the period for the repayment of medium-term loans and modified the legislation regarding individual long-term loans granted with a view to facilitating the acquisition of small rural holdings or, in certain special cases, to military pensioners, to former pupils of agricultural schools, etc. For these loans, the maximum period of repayment was extended from 25 to 30 years; on the other hand, the age of the borrower at the date of the payment of the last instalment, originally fixed at 65 years, was extended to 70 years.

Subsequently the Law of 24 March 1936 completed these first measures by prolonging from 25 to 30 years the period for the repayment of collective long-term loans and reducing the rates of interest and the fees payable at the time of modifying the loan agreements in order to facilitate postponement of repayment.

(1) LOUIS TARDY, Director-General of the National Agricultural Credit Bank (Paris): Report already cited.

Lastly, the Law of 25 March 1936 made it possible to grant postponement of repayment to debtors who were distressed but were acting in good faith. This law applies to all debtors, whether farmers or not, but it is a useful supplement to the preceding legislation, which only applied to the special class of agricultural borrowers.

It will be seen, therefore, that in France it has not been necessary to take exceptional measures in respect of agricultural indebtedness. The majority of French farmers, moreover, easily succeed in overcoming the difficulties that they encounter in the exercise of their vocation because they are usually, as is well known, small owners farming their holdings with the help of their families and because their costs of production are relatively low. On the other hand the mutual and co-operative agricultural organisations, notably the National Agricultural Credit Bank, afford them a particularly valuable aid in critical circumstances by enabling them to sell their products to better advantage and by placing at their disposal the credit they require for the needs of their farms.

Italy.

No very precise information is available regarding agricultural indebtedness in Italy, both because it is not possible to obtain statistics for a large number of debts contracted by farmers with private individuals, and because it is very difficult to separate, in mortgage credit and in credit for working expenses obtained from ordinary credit institutions, the debts that have been incurred for strictly agricultural purposes from the debts that the rural owners have incurred for other purposes.

However, relying on information sufficiently verified, we may say that in 1933 the indebtedness of Italian agriculture amounted to between 9,000,000,000 and 10,000,000,000 liras, of which about half was in respect of long-term loans and the other half in respect of medium-term and short-term loans. In the sum stated are included the large amounts of debts which, though not contracted for strictly agricultural purposes, weigh heavily on agriculture.

This aggregate estimate of indebtedness must be placed in relation with the figures indicating the value of Italian agricultural production in the national economy as a whole. Now the gross production of the land, calculated before the war at 8,000,000,000 gold liras, may be estimated as between 25,000,000,000 and 30,000,000,000 liras in 1933, while the return from the land properly so called, on which the debt-charge specially weighs, might be estimated at about 5,000,000,000 liras, as compared with a total value of landed property of between 80,000,000,000 and 100,000,000,000 liras. The relation between these figures and the figures representing the indebtedness of the farmers is not, therefore, particularly unfavourable.

It must further be observed that agricultural debts in Italy cannot all be considered as onerous, for from the total amount must be deducted about 3,000,000,000 liras of which the conditions of repayment have been lightened.

A characteristic of agricultural indebtedness in Italy is its unequal distribution throughout the different parts of the country; it is, in fact, a fairly heavy

burden on the provinces in which cultivation is intensive and industrialised, while in other provinces it is not out of proportion to their productive capacity and in yet others it is almost negligible.

An important cause of indebtedness lies in the very progress of agriculture, that is to say, in the charges, often very heavy, that many farmers have voluntarily assumed in order to carry out on their farms all the agricultural and land improvements contemplated by the new Italian agricultural policy, of which the "wheat campaign" and comprehensive land improvement represent the two main aspects.

The Italian Government, instead of having recourse to extreme measures to combat the most serious effects of indebtedness, has taken measures, some general and others special, with a view to the adjustment of the national agricultural economy (1).

Amongst the measures more directly concerning the subject of the present study may be mentioned the Royal Decree-Law of 24 July 1930, No. 1132, by which the extinction of onerous agricultural debts is facilitated. It provides for the repayment over a period of 25 years of short-term loans contracted by farmers at times when the high prices of products gave rise to the expectation of large profits, so that recourse was freely had to credit.

Of the payments in respect of debts so transformed, the State undertakes to pay a part of the repayment instalments, to the extent of 2 ½ per cent. Moreover, the Decree has provided that the farmer shall not have to bear, in any case, for operations of this kind, a higher charge than 7 ½ per cent. for interest and amortisation.

Another Royal Decree-Law of 15 May 1931, No. 632, gave to the farmers who are in arrears with their payments, the possibility of repaying in five annual instalments the loans for working capital obtained from agricultural banks and outstanding on 15 April 1931. In respect of these loans also the State has granted a contribution towards the payment of interest.

This same measure authorised the Ministry of Agriculture to grant a contribution not exceeding 3 ½ per cent. per annum for 25 years on behalf of farmers or of organisations after having assured itself of the special needs and of the exceptional and particular merits acquired by scientific farming and by contributions to the progress of agriculture, as well as of the importance that the continuance of their efforts presented for the interest of the general economy of the country.

The measures adopted to lighten the burden of mortgage loans must be added. We limit ourselves to noting the two Decrees of 18 September 1934, Nos. 1,463 and 1,464.

The first of these Decrees prescribed that the institutions carrying on mortgage credit business and the National Consortium of Agricultural Improvement Credit must cancel the bonds at a higher rate of interest than 4 per cent. issued in respect of loans on the security of rural or urban property and replace them

(1) G. NICOTRA: *Crise agricole et crédit agricole*. Article already cited.

by bonds bearing interest at 4 per cent. and utilise the saving thus effected in favour of the borrowers. The bearers of land bonds to be cancelled who did not accept the conversion, could obtain the repayment of the nominal capital. To form an idea of the advantages that the farmers have derived from this measure, it is sufficient to consider that the total amount of the mortgage loans granted in the form of bonds bearing interest at a higher rate than 4 per cent. was, at the time, about 4,000,000,000 liras, of which about half represent loans on the security of rural property.

As regards loans that are not represented by bonds, it was prescribed by the second Decree that the faculty granted to the debtor by Article 1,832 of the Italian Civil Code of repaying the sum bearing an interest higher than the legal rate, could always be exercised by him, even only two years after the agreement, and this faculty was extended to agreements providing for the repayment by annual instalments of the sums borrowed.

Switzerland.

The Swiss Peasants' Secretariate was instructed, some years ago, to make a study of the indebtedness of agriculture in Switzerland and to formulate proposals regarding the method of assisting excessively indebted farmers. We here set out the principal results of the enquiry (1).

The amount of the debts varies throughout the country in an extraordinarily marked manner according to the region studied, according to the direction given to production in the farms and the technical organisation of the farms, and according to the personal conditions of the farmer.

The Secretariate made the estimates indicated below of the capital invested in agriculture, basing them on the results of the live stock census and on those of the statistics drawn up with the aid of agricultural accounts:

	1911 (in millions of francs)	1931
<i>Assets:</i>		
Value of land	3,690	4,175
Value of improvements.	25	108
Value of buildings	2,637	3,431
Value of growing crops	771	923
Value of the farms	<u>7,123</u>	<u>8,637</u>
Live stock	900	1,482
Dead stock	418	673
Circulating capital	412	604
Farming capital	<u>1,730</u>	<u>2,759</u>
Total assets	<u>8,853</u>	<u>11,396</u>

(1) LE SURENDETTEMENT ET LE DÉSURENDETTEMENT DANS L'AGRICULTURE SUISSE. Report of the Swiss Peasants' Secretariate. Spring 1934. Brougg, 1934.

	1911 (in millions of francs)	1931
<i>Liabilities:</i>		
Mortgage debts	3,324	4,189
Debts on note of hand	313	441
Current debts	142	158
Total liabilities	<u>3,779</u>	<u>4,788</u>

Thus the total liabilities increased from 3,779,000,000 francs to 4,788,000,000 francs, representing, on the average, an annual increase of 50,000,000 francs. The liabilities amounted, in 1931, to 42 per cent. of the assets. The aggregate indebtedness of agriculture, estimated at about 5,000,000,000 francs, represents about 50 per cent. of the total assets.

The debts per hectare of the area have shown the following variations in the periods and years indicated:

	1906-13 fr.	1914-19 fr.	1923-27 fr.	1931 fr.	1932 fr.
Mortgage debts	2,111	2,589	3,108	3,616	3,771
Debts on note of hand	195	193	392	390	402
Current debts.	88	90	145	141	151
Total	<u>2,394</u>	<u>2,872</u>	<u>3,645</u>	<u>4,147</u>	<u>4,324</u>

The increase of indebtedness, since the period immediately preceding the war, for the farms of which the results are capable of being compared and which submit their accounts to the Swiss Peasants' Secretariate, is estimated at between 1,000 and 1,500 francs per hectare on the average.

On the average of all farms, the mortgage debts amount to nearly 90 per cent. of the total indebtedness.

The small farms are more heavily indebted per unit of area than the large farms. Relatively to the assets, the small farms are less heavily indebted.

Broadly speaking, farms are considered heavily indebted in which the indebtedness exceeds 5000 francs per hectare. It would seem that, taking the country as a whole, about 25 per cent. of the farms, or, in round numbers, 50,000 farms, must belong to this class. Out of this total, there are nearly 20,000 farms which it is not possible to help by the measures taken in pursuance of the policy of production and prices.

The causes of excessive indebtedness are various. The debts were caused, on the one hand, up to 1914, by the economic development of Switzerland and, on the other hand, since 1914, they have been caused by the payment of obviously exaggerated prices for land, by the unscientific employment of capital, by the failure to apply the Swiss law of peasant succession, by the high cost of building, etc.

An important cause of indebtedness after the war is the unprofitableness of agriculture, during the years 1921-27 and, again, since 1930. The disproportion between the interest on the debts, which was 5 per cent. and more, and

the net return, amounting to between 2 and 3 per cent., rapidly caused the heavily indebted farmers to encroach still further upon their capital and compelled them to contract new debts.

Mention must also be made, as another characteristic cause of indebtedness in the post-war period, of the fact that the real value of the debts contracted during the years 1918 to 1932 increased as a result of the decline in the prices of agricultural products.

Another cause of indebtedness, it is stated, was the lightness in granting credit shown by the banks, which had more regard for the safety of their investments than for their utility to the public economy. In virtue of the principle that investments on mortgage are well secured, certain farmers, inasmuch as they were able to offer good security, found that they could obtain, so to speak, unlimited credit.

The Swiss Peasants' Secretariate has recently carried out studies (1) from which we extract the following figures relating to agricultural indebtedness per hectare:

	Year or period	All farms frances		Year or period	All farms %
Mortgage debts	1928-30	3,460	Total debts as percent- age of the assets.	1928-30	50.79
	1931-34	3,789		1931-34	53.27
	1933	3,911		1933	54.87
	1934	3,859		1934	55.10
Overdrafts on current accounts.	1928-30	78	Mortgage debts as per- centage of the value of the landed property	1928-30	58.33
	1931-34	86		1931-34	60.03
	1933	89		1933	61.16
	1934	64		1934	61.71
Other debts on which interest is payable.	1928-30	273	Mortgage debts as per- centage of the total indebtedness.	1928-30	87.76
	1931-34	293		1931-34	87.86
	1933	294		1933	87.96
	1934	276		1934	89.06
Outstanding accounts .	1928-30	132	Mortgage debts as per- centage of the return.	1928-30 (2)	80.32
	1931-34	145		1931-34 (3)	99.17
	1933	152			
	1934	135			
Total debts	1928-30	3,943			
	1931-34	4,313			
	1933	4,446			
	1934	4,334			

In 1934 the total debts per hectare were, for the first time for several years, somewhat reduced, both as regards the general average and in the different size-groups of farms. The reduction amounts, on the average, to 112 francs.

Expressed as a percentage of the assets, the total debts again increased in most of the size-groups because the assets had decreased more than the liabil-

(1) RECHERCHES RELATIVES À LA RENTABILITÉ DE L'AGRICULTURE PENDANT L'EXERCICE 1934-35 (DU 1^{er} MARS 1934 AU 28 FÉVRIER 1935). Report of the Swiss Peasants' Secretariate to the Federal Department of Public Economy. Part II. Berne, 1936.

(2) In relation to the yield of 1901 to 1930. — (3) In relation to the yield of 1901 to 1934.

ities. The degree of indebtedness rose, in 1934, to more than 55 per cent. of the assets.

A slight modification occurred in the structure of the indebtedness, inasmuch as the proportion of the mortgage debts rose, in round numbers, from 88 to 89 per cent. of the total debts.

In round numbers, 14 per cent. of the properties farmed by their owners are little or not at all indebted (nil to 1,000 francs per hectare); 24 per cent. are moderately indebted (1,000 to 3,000 francs per hectare); 27 per cent. show an average indebtedness (3,000 to 5,000 francs per hectare); 20 per cent. are heavily indebted (5,000 to 7,000 francs per hectare) and 14 per cent. are very heavily indebted, having debts of over 7,000 francs per hectare. Amongst the small holdings, in which the capital invested generally amounts, per hectare, to a much larger sum than in the larger holdings, the proportion of very heavily indebted farms is appreciably larger than amongst the medium-sized holdings. Amongst the holdings of more than 30 hectares none are burdened by larger debts than 7,000 francs per hectare.

The Swiss Peasants' Secretariate has drawn up, with a view to a solution of the problem that is here being studied, a complete programme involving a comprehensive action for the relief of indebtedness, based on a revision of the constitution, and a minimum programme. The object assigned to this latter is to prevent farmers who have become distressed through no fault of their own and who took their farms before 1 January 1934, from being driven out of their holdings. To attain this object, it is considered necessary:

(a) to develop the peasants' aid banks;

(b) to develop the protective measures of a legal nature taken in favour of distressed farmers;

(c) to complete the legislation so as to prevent a new indebtedness.

The peasants' aid banks give help to distressed farmers in the form of loans with or without interest, subsidies for the payment of interest and other subsidies not repayable. It is proposed, by the opening of new credits, to enable these institutions to increase up to 10,000 francs the sums granted for the relief of the farms to be helped.

As regards point (b) the Federal Order of 28 September 1934 (1) is specially noteworthy; this Order lays down temporary juridical measures for the protection of distressed farmers. It provides a procedure for the adjustment of agricultural debts. This procedure is applicable in the cantons that have organised, on behalf of the farmers, relief operations under the terms of the Federal Order of 30 September 1932 (2) relating to temporary financial assistance on behalf of distressed farmers. Every owner of a farm who farms it himself or has rented it and derives his means of existence from the rent can apply for this procedure if, in consequence of the economic crisis and through no fault of his own, he is not in a position completely to satisfy his creditors and if there

(1) "Textes législatifs" published by the International Institute of Agriculture. 1934 Series, No. 22.

(2) See: ANNUAIRE INTERNATIONAL DE LÉGISLATION AGRICOLE, 1932, page 1, 148.

are guarantees that the farm can continue to be worked systematically. The procedure for the adjustment of indebtedness may be voluntary or official. In the second case, the following measures can be taken:

(1) Suspension of the repayment of capital; for capital credits guaranteed either by fixed property depending on the debtor's farm (pledge of fixed property) or by a charge on this fixed property (collateral security), or again by a lien on the live stock, a suspension may be granted not exceeding four years; for debts repayable by instalments, the suspension may be obtained in the form of a reduction of the annuity charge, of an increase in the number of instalments or the temporary suspension of these payments; however, the period over which the instalments are payable cannot, by these measures, be prolonged by more than four years;

(2) Reduction of the rate of interest in respect of secured loans; for capital guaranteed by pledge and covered by the pledge, the interest may be reduced to 4 ½ per cent., account being taken of the commissions and other supplementary charges of this kind, if it is higher than this rate, or, if it is lower, maintained unchanged for the period between the due date immediately preceding the opening of the proceedings and, at latest, the expiration of the suspension of the repayment of the principal;

(3) Reduction or suppression of the interest on capital sums not secured, as from the last due date preceding the opening of the proceedings and for not more than four years;

(4) Extinction of interest due; when the adjustment involves a general arrangement in which the creditors of loans given on note of hand lose 50 per cent. or more of their credits, the debtor can free himself completely from the interest due covered by the pledge by making in cash, for each credit, a partial payment of 75 to 90 per cent.

Besides the procedure for the adjustment of debts, the same Order contains measures of protection in favour of tenant farmers consisting in the suspension of the payment of rents and in the reduction of rents.

The report of an inquiry into the realisation of fixed property pledges, bankruptcies and arrangements with creditors in agriculture in 1934 published by the Federal Bureau of Statistics supplies highly significant information regarding the situation of the farmers. It is stated in the report that the latest and gravest consequences of the serious economic disturbances have been either that the heavily burdened farms are abandoned or that forced transfers of such properties have taken place.

There were 1,048 forced sales of fixed property in 1934 affecting persons carrying on farming as their main vocation.

In the whole of Switzerland, 580 farms were declared bankrupt. In comparison with 1933, the number of bankruptcies had slightly increased (by 39 cases).

Since 1928, there have been 5,997 realisations of fixed property pledges affecting farmers, and more than 2,500 persons carrying on farming as their principal vocation have been declared bankrupt.

In 1934, the measures of legal protection, as well as the action taken in aid of the heavily indebted farmers, which we have described above, entered

into force on a wide basis and they preserved many farms from forced sale. In virtue of the extraordinary legal measures in favour of the farmers, 1,028 official arrangements with creditors were made, to which may be added 158 cases in which proceedings were taken under the ordinary law with a view to making arrangements with creditors.

In spite of the operations of the peasants' aid banks, together with the measures of legal protection for the heavily indebted peasants, the number of bankruptcies and realisations of fixed property pledges remains practically stable; if anything, it has slightly increased.

It must also be mentioned that, up to the month of April 1935, about 18,300 applications for financial aid were presented to the distressed peasants' aid banks.

The economic conditions of agriculture have therefore, on the whole, grown worse in recent years. In spite of the measures of general protection, in a large number of farms the receipts have been smaller than the expenses caused by the necessity of keeping the labourers available and by the charges resulting from loans over and above the current expenses. If to the foregoing are added the necessity of providing for instalments of repayment and the difficulty of obtaining capital, it will readily be understood that farmers who have no financial reserves at their disposal will have difficulty in safeguarding their farms.

In June 1936 a federal bill on the relief of farm indebtedness was submitted to the Chambers. Starting from the ascertained fact that agricultural debts in Switzerland are mainly mortgage debts, the bill is primarily aimed at reducing them to a "tolerable amount." The object of the action contemplated is to place the debtor in a position to pay the interest, while deriving a reasonable return from his own capital and receiving a suitable remuneration for his work—suitable, in the sense of being sufficient to supply subsistence to him and to his family. Only such mortgage credits would be affected by the adjustment procedure as, after valuation, appear not to be covered. For the rest, it is only provided that there shall be a suspension of the repayment of the capital, and a reduction of the interest to $4\frac{1}{2}$ per cent. for not more than eight years.

The relief of indebtedness will be applied case by case, in order that abuses may be avoided.

In the adjustment proceedings the debtors, the creditors and the community will collaborate. The share of the community will be represented by equal contributions from the Confederation and from the Cantons. The former will assign, for twenty years, 5,000,000 francs a year to the fund for the relief of indebtedness. The subsidies of the cantons will be drawn from this fund. The possibility of a more effective assistance to regions where indebtedness is particularly heavy is also provided for.

The creditor must, on his side, renounce a part of his credit. The payment of the remainder, by the debtor and the community, will be assured in the form of amortisation within a period of twenty years, according to a scale to be determined. The creditor will be bought out by means of a "redemption bond," which will be negotiable and can be presented at the Amortisation Bank, of an amount equivalent to the capitalised value of the annuities (paid by the debtor and the community) and bearing interest at 4 per cent. guaranteed

by the canton. For the balance not covered, he will receive a "certificate of uncovered credit," which can be put forward in opposition to claims of third parties. This certificate confers, moreover, on the creditor rights against the debtors and his heirs in the event of their return to better fortune or of the alienation of the property at a profit. As to mortgage credits exceeding twice the estimated value of the property, they will be liquidated by the payment of a dividend fixed by arrangement.

As it is indispensable, in order to arrive at a result, to ascertain the whole position of the debtor, the debts on note of hand can also be embraced in the procedure outlined above.

Lastly, the bill lays down "measures of safety." Their object is to ensure that the beneficiary of this assistance shall not afterwards compromise it himself by ill-considered acts. With this object it is provided that there shall be restrictions on his right to dispose of his property, that he shall be obliged to keep accounts and, in serious cases, that a legal adviser shall be appointed.

The Federal Council also issues decrees containing preventive measures the object of which is to limit the indebtedness in the future, not only of the farms which will be relieved, but of all farms. These measures consist principally in the reform of the procedure of valuation, of mortgage bonds and of the peasant right of succession, which are measures of gradual application, as well as in the introduction of a general limitation of mortgage charges, which is perfectly applicable owing to the existence of the land register.

(to be continued).

G. COSTANZO

ECONOMIC CONDITIONS AND POLICIES AFFECTING AGRICULTURE DURING THE WORLD ECONOMIC DEPRESSION

PHASES OF THE DEPRESSION AND RECOVERY IN AUSTRALIA.

CONTENTS: I. *Introduction.* — II. *Characteristics of the Australian economy before the crisis.*

The importance of agriculture and agricultural exports. Tariff policy and the significance of capital imports. — III. *The nature of the crisis.* The decline in borrowings from overseas and the fall in prices. Disequilibrium in the balance of payments. The problem of production costs. — IV. *First Phase: Resistance.* Inflation versus deflation. — V. *Second Phase: Compulsory Adjustment.* The force majeure of the crisis. Depreciation of the exchange. The Premiers' Plan. — IV. *Conditions and Policies after the initiation of the Premiers' Plan.* Financial improvement. Cost reductions. Tariff revision. Agricultural policies and assistance. The growth of confidence and improvement in the internal situation. The rise in wool prices. — *Conclusion.*

I. — INTRODUCTION.

In some previous studies published in this *Bulletin* (1), an attempt was made to describe the factors affecting the world agricultural situation in the years preceding the outbreak of the world crisis in 1929. It was shown that

(1) Agricultural Protectionism and the Agricultural Situation 1925-29. *Monthly Bulletin of Agricultural Economics and Sociology*, March-May 1936.

tendencies were then already in operation which were likely to result in a period of disequilibrium in agriculture. It is the object of further studies for this *Bulletin* to analyse in respect of certain countries whose international trade, whether import or export, in the primary agricultural products was particularly affected, the nature of that disequilibrium and the character of the reactions, both legislative and economic, which resulted in an emergence at least from the severest phases of economic depression. It is intended to study a small number of countries of various types in an endeavour to bring out the way in which the impact of the crisis was felt and the way in which divergent conditions led to divergent types of policy being followed, and to observe the relative importance of national conditions, national efforts and international forces in determining the process of recovery. The studies cannot therefore be limited to consideration only of conditions and policies directly affecting agriculture—such as agricultural tariffs, subsidies or marketing schemes—but must be extended further to the consideration of broader policies—monetary and financial and even industrial—which often played the decisive role in overcoming the obstacles to the economic equilibrium and well being of agriculture. The studies divide broadly into two main groups—the first being concerned with agricultural exporting countries and the second with agricultural importing countries. The first study, the subject of the present article, refers to Australia.

II. — CHARACTERISTICS OF THE AUSTRALIAN ECONOMY BEFORE THE CRISIS.

From the point of view of international agricultural economics, Australia is one of the most interesting and instructive countries. Even though the urban population is larger than the rural population Australia is primarily an agricultural and pastoral country. The value of primary production (1) is always considerably in excess of industrial and mineral production. Of the total estimated value of production in 1927-28 of £453 million, the contribution of the farmer was £259 million or 55 per cent., whilst manufacturing was responsible only for £159 million or 35 per cent. the remaining 10 per cent. being contributed by mining, fisheries, and forestry (2). At the same time agriculture is dependent to a very high degree on exports. For the ten years 1921-1922 to 1930-31 34.9 per cent. of the production of agricultural products properly so called was exported, 66.8 per cent. of pastoral products and 19.2 per cent. of dairy and farmyard produce. In the same period these three groups represented 88.2 per cent. of total exports. Thus the essential link between Australia and the overseas world was formed by agricultural exports, in exchange for industrial products. The main exportable commodities are wool, wheat, butter, lamb and beef, but the first is by far the most important. In 1927-28 the total value of the exports of all these commodities equalled £96.3 million of which the share of wool was £66 million and that of wheat and flour

(1) Including crops, live stock and produce and excluding mining.

(2) Quarterly Summary of Australian Statistics. March 1931, p. 13.

together £20 million, thus leaving only about £10 million to the remainder. Thus if Australian exports depend on agriculture, agricultural exports depend on wool and wheat. Of a total wool production in 1927-28 of 888 million lbs., 742 million lbs. or about 84 per cent. were exported. Again, of a wheat harvest in the same year of 119 million bushels 74 million bushels or nearly 63 per cent. were exported as grain or flour. These figures, referring to relatively prosperous conditions, though they may vary from year to year, indicate the order of importance of the various exports in the Australian economy. At the same time Australian exports of these two commodities represent an important proportion of world exports, so that it may be said that not only is Australia bound to the world but also that the world is bound to Australia. Of world net exports of wool averaging from 1925 to 1929 863,000 metric tons Australia contributed an average of 312,000 metric tons, or about 36 per cent., being indeed the largest exporter. The Australian share of wheat exports is considerably smaller, but nevertheless of considerable importance. Thus, for the same period, world net exports averaged 21.5 million metric tons, of which the Australian share was 2.6 million metric tons or about 12 per cent.

Australia presents an opposite economic picture to that presented by industrial Europe. Whereas Australia exported staple agricultural products, industrial Europe imported them. Whereas industrial Europe sought to stimulate its agriculture by tariffs, agricultural Australia sought to develop her industry by the same method. And whereas before the crisis, Australia's chief market in Europe was a capital exporter, Australia was importing relatively large amounts of capital on long term.

Any analysis of Australian economic conditions must emphasise the importance of the Australian tariff policy. For Australians protectionism is a method of organising industry and of raising the standard of living in normal times and of overcoming difficulties in emergency. Not even the farmers, who are the most vociferous critics of the actual tariff, usually care to advocate the adoption of freedom of trade.

Yet though the principle of protectionism as such is hardly a matter for controversy in Australia, its application is one of the major political problems. No political party in Australia is a "free trade" party, but there is a natural disagreement as to what occupations shall be protected and to what degree. This dissension occurs principally between the primary producers and the industrial population, though inevitably there is minor disagreement between the various branches of industry and between the various branches of agriculture.

From the farmer's point of view, the Australian tariff is an industrial tariff which raises costs of living and of production, and which, by reducing imports, reduces foreign purchasing power for Australian goods, raises their prices, and inspires tariff retaliation, thus all to the disadvantage of Australian agricultural exports on which Australia ultimately depends. On the other hand, the industrialists urge the necessity of employing in industry the large urban population at an "Australian standard of living," and assert that tariffs are necessary in order to guarantee the high wages which are granted in Australia by judicial decision in the Federal Arbitration Court. Though to this it may

be said that since the wages granted are assessed themselves on the cost of living which reflects the state of protection at the time, the vicious circle is evident. The industrialist indeed can point to important agricultural commodities the prices of which are kept high by tariffs, and which affect the cost of living, particularly those of sugar and butter.

It will be seen that both the farmer and the industrialist have good reasons to oppose the protection of the other, at least unless the one also benefits by an equivalent assistance from the State. Instead of these two opposing forces bringing about generally low tariffs the contrary was the case, and high industrial tariffs were balanced by subsidies and bounties and other forms of assistance to agriculture.

It is however of importance in order to grasp the policy followed in the depression to note that already in 1925 doubts about the tariff policy were beginning to be felt in responsible circles.

From 1925 onwards the reports of the Australian Tariff Board, the body which was set up in 1921 to make the Australian tariff "scientific," and which in the first years of its existence had been strongly in favour of ever higher tariffs, suddenly began to reveal the doubts of the Board as to whether the tariff was not too high. The Board actually condemned the "custom of passing back and forth between the Federal Arbitration Court and the Tariff Board for increments in wages and duties." Stimulated by the new attitude of the Board which became even more pronounced in further reports the Government of Mr. Bruce went so far as to appoint a committee of experts to investigate the costs and benefits to Australia of the tariff.

The facts brought out in these years by independent authorities and by the Tariff Board revealed the Australian protective system to be one of the heaviest in the world, and the more so when it is considered that the dependence of Australia on overseas trade was perhaps greater than that of any other country. If Great Britain in virtue of her trade interests had adhered for 70 years to free trade, even more might Australia have been expected to be an advocate of the liberal doctrine. But on the contrary, both for the height and the rate of growth of tariffs, Australia was remarkable. A document submitted to the World Economic Conference of 1927 estimated that the tariff had increased by 45 per cent. in 1925 as compared with the level in 1913. The Tariff Board in 1928 declared that "The tariff wall is markedly rising. In the Customs Tariff 1908 there were only eight items which provided *ad valorem* duties of 40 per cent. or over. In the existing Customs Tariff there are 259 items or sub-items which provide *ad valorem* duties of 40 per cent. or over..." The Committee of Experts referred to above calculated that the tariff had raised prices by about 10 per cent., imposing also a burden of about 9 per cent. on the cost of exports. It estimated that about £75 million of Australian production were entirely dependent on protection, of which £16 million sugar and butter and £55 million manufactures. In agriculture the protection of sugar, butter and dried fruits was accompanied by export bounties raised by levies on the home market. In 1925-26 Australians paid £27 per ton for their sugar whilst they sold it on the world market at £11 6s. For their dried fruits they paid £57 per ton whilst selling them

in England for £37. Under the Patterson scheme a tax of sixpence per pound was levied and the proceeds applied to exports of butter, thus raising the home, price and lowering export prices.

The result of the various reports on the Australian tariff, public and private was, even when the tariff policy as a whole was believed to be justified, to bring out at least the need for a more careful investigation and a weighing up of the worth of particular industries and the desirability of protecting them.

Nevertheless, and this is the third feature of the Australian economy, prior to the crisis, imports were high and exceeded exports. The following table gives a picture of the structure of overseas trade and borrowing in the years preceding the crisis year 1929-30.

Year	Merchandise imports	Exports incl. gold produced in Australia	Balance	Interest due on overseas debt	Added overseas indebtedness
1922-23	131.7	119.9	— 12.8	21.4	8.0
1923-24	140.6	119.9	— 20.7	23.2	41.6
1924-25	147.7	163.2	+ 16.5	23.4	2.6
1925-26	151.3	144.2	— 7.1	25.4	40.4
1926-27	164.1	134.9	— 29.2	25.9	11.7
1927-28	146.9	140.5	— 6.4	29.7	54.3
1928-29	143.3	140.5	— 2.8	30.5	2.1

Thus Australia instead of having an export surplus with which to meet overseas charges actually had an import surplus (as shown in cols. 3 and 4) due to the large imports of capital during this period. It is clear that if these imports of capital were to cease, and if exports were reduced, then Australia's financial situation would be serious.

This was precisely the kernel of the crisis.

Certain other features operating before the crisis, the seriousness of which for agriculture tended to be hidden by the high prices of agricultural exports, should be noted, for they were responsible for the prolonging of the depression even after the most acute financial problems had been solved. During and since the war governmental taxation and expenditure increased at a rate exceeding that of production. Whereas in 1913 the taxation amounted to 10.4 per cent. of the value of production, in 1927-28 it had risen to 19.6 per cent. Again, public debt increased from £705,400,000 in 1919 to £963,000,000 in 1925 and continued to increase, reaching £1,104,000,000 in 1929. Whereas in 1913-14 expenditure of the Commonwealth and of the States from consolidated revenue equalled £63,400,000, in 1927-28 it had risen to £195,950,000. In the former case it represented about 28.5 per cent. of recorded production and in the latter 45.0 per cent. Though the figures of recorded production do not correspond to the national income, the trend shown is significant. In 1927-28 the Commonwealth for the first time had a budget deficit, though the States had had deficits for several years.

In spite of the high tariff we noted that imports were high. Consequently customs revenue was also high and formed the chief single source of Commonwealth revenue. It should be clear too that if borrowings abroad were to stop, the tariff would become more effective and imports, for this reason alone, would diminish and an important source of Government revenue would be stopped. Customs revenue in 1926-27 accounted for 42 per cent. of the total consolidated revenue of the Federal Government.

The burden of overseas interest also rose as a consequence of the increase in indebtedness. In 1913 external interest equalled 9.5 per cent. of exports and 3.4 per cent. of production. In 1928 the figures had risen to 19.5 and 6.0 respectively.

The increase in Federal State expenditure and interest thus represented an increased burden on the farmer which did not correspond to a proportionately increased capacity on his part to meet it. Costs in the form of wages, materials, implements and railway freights were also rising, due respectively to upward adjustments by the Federal Arbitration Court, and of the tariff as well as of the rates charged by the State railways. The State railways, incidentally, were one of the main sources of budgetary deficits.

From the above survey of some elements in the Australian situation before the crisis it is evident that some economic readjustment would have been necessary even without a crisis of the severity of that of 1929 onwards. The statement that since before the war and up to 1928-29 "only two primary industries... had shown a substantial increase in males employed... these were dairying and sugar, both favoured by the tariff" (1) reveals a significant aspect of the development of agriculture.

III. — THE NATURE OF THE CRISIS.

We have seen that Australia depended to an extremely high degree on agriculture and that agriculture depended to an equally high degree on export overseas. We have further seen that Australia had been borrowing large amounts of capital from abroad, and consequently imports exceeded exports. Imports were being maintained at high levels by the importation of capital. If imports were to be maintained and capital imports were to cease there would occur, unless exports were increased, a severe strain on the whole Australian financial and income structure. Thus Australian welfare depended on at least two sets of conditions remaining favourable, both depending to an important degree on economic conditions abroad, which would chiefly determine both the value of Australian exports and the size of Australian borrowings. That there was no margin of safety in purely Australian conditions was clear.

Up to the fiscal year 1927-28 both borrowings and exports were maintained; exports indeed increased in 1927-28 in spite of a drop in the value of wheat exports. The adverse commodity balance of trade actually diminished by

(1) Copland. *Economic Journal*, December 1930.

£23 million. On the other hand borrowings reached their highest level in 1927-28, bringing the total new borrowings in these years up to £106,500,000. But the approaching reaction was evidenced in the decline in retail sales which was reflected in the decline of imports in the first half of 1928. And this very decline, which was necessary, involved a decline in customs revenue and a deficit in the Commonwealth Budget. Nevertheless though there was a certain amount of uneasiness in official circles at the end of the year, the most widespread opinion was that the evident setback in internal expansion was but temporary. Exports were expected to be higher and money was still available, as evidenced by the loans from overseas.

In 1928-29 the situation began to change definitely for the worse. The most important single fact was the almost complete cessation of foreign loans, due both to a growing lack of confidence in Australia abroad and to the growing financial stringency in the capital markets. The table that we have already given shows that new borrowings fell from £54 million in 1927-28 to £2.1 million in 1928-29. In the second half of 1928 wool prices began the decline which persisted throughout the next years. The wool clip was exceptionally large, at 968 million lbs. compared with 888 million lbs. in 1927-28, but the total value of wool exports fell from £66 million to £61.6 million.

Wheat prices were also low as a result of large crops in Australia and elsewhere, so that the growth in returns from exports was not as large as expected. The increase in value of wheat exports just about offset the decline in the value of wool exports. Again, there was no change in the total trade balance sufficient to offset the decline in borrowings. Total exports indeed remained at about the same level as in the previous year whilst imports fell only slightly, reflecting the confidence which was still felt by Australian traders. Overdrafts in London began to mount up whilst there were further budget deficits. National income however dropped very slightly, from an estimated figure of £650 million to £645 million.

1929-30 however was the first real crisis year. The two props on which the Australian economy rested, namely, the returns from exports and foreign loans, gave way thoroughly and decisively, with drastic effects on the national income from agriculture and industry, on Governmental finance, on the exchange, on the Australian overseas indebtedness and on internal employment.

In the financial year July 1929 to June 1930 total exports fell, in sterling, by £40 million, whilst imports, in spite of drastic measures of restriction which are described later, only declined by £13 million. Wool export prices fell heavily throughout the year and averaged only 11.3 pence per lb. in the grease, as compared with 17.58 pence per lb. in 1928-29 and an average of the years 1923-27 of 20.49 pence per lb. Since the quantity of wool exports also declined the total value of exports fell by almost half from £61.6 millions to £36.6 millions (1). The quantity of wheat exports also fell, but wheat prices only began to fall towards the second quarter of 1930, and in fact fetched on the average

(1) Australian currency values.

5s. per bushel in 1929-30 as compared with 4s. 10d. in 1928-29. Nevertheless the combined value of wheat and flour exports fell to £15 millions as compared with £26 millions in the previous year.

In spite of the Loan Council's hopes in 1929 the amount raised in fresh long term loans overseas during 1929-30 was even less than in the previous year. Whereas in the three years up to 1927-28 borrowings abroad had averaged some £35 million per annum, in the next two years they had dropped to an average of less than £2 million, the decline thus somewhat more than exceeding the amount required to meet interest charges on the debt. It can be seen that these payments could not be met from an export surplus. Indeed in spite of the fact that gold was exported to the value of £25 million there was still a net deficit of £6 million. Overdrafts and advances in London accumulated to £38 million by the end of 1930. The cessation of long term borrowing thus meant the piling up of short term debts.

The effect of the fall in prices of the principal exports and the decline of oversea borrowing was to create, as can be imagined, serious financial embarrassment to the Governments. In spite of a small increase in Commonwealth taxation, at the end of the financial year there was a deficit of £6.5 million, whilst State deficits totalled approximately £10 million.

On the internal economic situation of the country the effects were equally grave. The recorded value of production declined from £448 million to £391 million. Production of agricultural products properly-so-called declined by £12 million and of pastoral products by £30 million. The value of manufacturing and mining production also declined. Professor COPLAND gives figures for national income showing a decline of £81 million, about one eighth of the national income of 1928-29. Both branches of basic national activity were severely affected, agriculture by the fall in prices and the maintenance, through the tariff and wage policies, of high costs, and industry through the consequent diminution in the purchasing power of the farmer. Industrial unemployment increased at a rapid rate throughout 1929. By the second quarter of 1930 industrial unemployment had increased to 18.5 per cent. of Trade-Union members as compared with 10 per cent. in the corresponding quarter of 1929. Net earnings of the railways declined from £10.3 million to £7.1 million. The disastrous fall of agricultural prices resulted in a growing indebtedness of the farming population. According to the Report of the British Department of Overseas Trade (1) "production over a wide area has become so unprofitable that commitments of various kinds have grown to alarming proportions, and that at the present moment there is serious danger in some areas of producers walking off their properties." A general conference between pastoralists, agriculturalists and representatives of banks, trading and manufacturing associations was held in New South Wales in December 1930, which

(1) Economic and Trade Conditions in Australia, London 1931.

described the conditions of the primary industries. Liabilities of wheat farmers in New South Wales were estimated at £10.5 million apart from large sums lent on mortgage. The total return on the New South Wales wheat crop was estimated at only £4.2 million, obviously far less than total requirements to cover costs.

One feature of the situation, for which farmers, already before the crisis, were continually calling for remedy was the high level of costs in relation to prices. Whereas in January 1929 the price indices of farm and industrial products stood at 180 and 175 per cent. of the 1911 level respectively, in January 1930 the former had fallen to 158 and the latter had actually risen to 178. In July 1930 the relation had changed even further against the farmer, the agricultural index having fallen to 146 whilst the industrial index had risen to 182. Again, according to the statement issued by the above mentioned conference the total costs of wheat growing per acre was about 28s. whilst the farmer only obtained 17s. Similar divergences between prices and costs also occurred in wool.

Thus by the end of 1929 and the beginning of 1930 three related problems required urgent solution (a) the external problem, or the problem of overseas indebtedness, (b) the problem of national finance, and (c) the internal economic problem, comprised under the headings of national income, agricultural solvency and industrial unemployment.

In each case it can be seen that the range of conceivable solutions was wide. Each problem would be solved if export prices were to rise or if overseas income from agriculture were to increase through a large increase in the volume of exports. The first problem could be solved even without this, provided imports were reduced. Again the second problem could be solved either by an increase in taxation or decrease in expenditure, whilst the third problem in the absence of rising prices, could also find its solution in a reduction of costs. There was, so to speak, a variety of ways out, some depending on Australia's own efforts and some depending on outside conditions, and lastly, some depending on the ability of the economic mechanism to find its own equilibrium in the manner in which it had done so in previous crises. In analysing the Australian reaction to the crisis it is thus of interest to determine which of these methods were responsible for the more satisfactory though not perfect situation which Australian economy had reached by 1935.

(to be continued).

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No. 2

AGRICULTURAL INDEBTEDNESS (*continued*) (I).

(B) SCANDINAVIAN COUNTRIES.

Denmark.

The ease in obtaining credit, which at one time facilitated the remarkable technical and commercial development of agriculture in Denmark, placed the Danish farmers, when the economic crisis supervened, in very serious embarrassment. They had been able, during the period of prosperity, easily to meet the heavy mortgage charges incurred; but the subsequent collapse of prices made it impossible for them to fulfil their engagements.

The agricultural mortgage debt in 1926 amounted (2) to 50 per cent. of the value of the properties mortgaged and it is estimated that as a result of the fall in land values that has taken place since then, it has reached a still higher percentage.

In 1933, the total mortgage debt on rural property was calculated as being 3,750,000,000 crowns, whereas the aggregate value of the farms was 5,400,000,000 crowns.

This debt is very unevenly distributed, in the sense that certain properties are entirely exempt, whereas others are indebted for sums greatly exceeding their estimated value.

Most frequently the debts arise out of the transfer of the properties by succession and are not due to loans contracted for reproductive purposes.

In Denmark, the indebtedness of rural properties is regarded as a serious social problem and it is desired to see it regulated in accordance with the principle that has always inspired the agricultural policy of the State: the maintenance of the peasant class and of small farming as the economic pillar of the fundamental activity of the country.

To prevent the collapse of the farms, the Government in the first instance tried to relieve the farmers by the establishment of "crisis funds," to be distributed in the form of subsidies to the most distressed farmers, in order to put them in a position to pay their mortgage and fiscal charges.

(1) For the first part of this study see the issue of January 1937 of this *Bulletin*.

(2) DANEMARK. L'AGRICULTURE. Le Conseil de l'agriculture. Copenhagen, 1935.

But, in view of the continuance of the crisis, new measures became necessary, providing for moratoria, possibilities of making arrangements with creditors and lastly conversion of debts.

As early as the autumn of 1931, Parliament amended the law on State credits (out of the Industrial Loan Fund) to the owners of agricultural land to allow them to come to a voluntary or compulsory arrangement with their creditors without being compelled to become bankrupt.

At the beginning of 1933, the measures in force on this subject, after some amendments had been made to the original law, were as follows:

To allow of the loan being granted, the percentage to be paid to the creditors cannot, in the arrangement, be fixed at more than 35 per cent. of their claims. As a general rule, the loan must not exceed 10 per cent. of the estimated value of the farm and in no case may it exceed 8,400 crowns.

In addition to the percentage above mentioned, the creditors may receive a further 35 per cent., on condition that during a period of five years, they renounce this part of their claims in exchange for a second mortgage on the property after that of the State. This mortgage does not bear interest, but becomes repayable at the end of five years. In the event that, during this five-year period, the weekly average butter and bacon quotations rise not less than 35 per cent. above the averages of the second half of 1931, the mortgage must be repaid in full or, at any rate, partially.

According to a law voted in the Spring of 1933 in favour of the owners of farms who have not already obtained an agreement under the old law, a new moratorium of three years was set up for that part of the mortgage in excess of the aggregate value of the farm.

The postponement of forced sale of agricultural properties was provided for by a law dated 16 November 1932. Under the terms of this law, a forced sale can be postponed if the owner prove that he has endeavoured to arrive at an arrangement with his creditors, or that he has good prospects of an improvement in his economic position in the near future. The postponement may be granted for a period of three months and, in special circumstances, this limit of time can be further prolonged.

In order to lighten the burden of the taxes and mortgage interest payable by owners and tenants of farms, Parliament granted, by a Law dated 19 October 1931, a sum of 30,000,000 crowns, to be distributed according to determined principles.

More than 135,000 farmers, that is, 67 per cent. of all the farmers of the country, proved that they were entitled to receive a subsidy under the terms of this law. The sum of 30,000,000 crowns being insufficient to satisfy the demand, a law voted in 1932 increased the grant and in all about 42,000,000 crowns were distributed.

In addition to the formation of the crisis fund mentioned above, regulations were issued by which a postponement of payment was granted to owners of farms, to fishermen, to artisans, to shopkeepers and to day-labourers. As far as agriculture is concerned, the law prescribes that mortgages on agricultural properties in respect of which the interest or normal instalments of repayment

have been received, or a postponement has been obtained, cannot be converted into loans for a shorter period.

A Law voted in April 1933 facilitated the conversion to loans at a lower rate of interest, of the loans granted by the mortgage credit companies. In order to render this conversion possible, and also for other purposes, a fund was set up in May 1933; when the total of the loans made out of this fund was at its maximum (September 1934) it amounted to about 150,000,000 crowns. Loans out of this fund can be granted to mortgage credit companies as well as to private traders and to commercial organisations in order to enable them to meet the difficulties that may arise in consequence of the application of the provisions of the law on the moratorium.

By the law on conversion and by that on the fixing of rates of interest, both adopted on 16 December 1933, other measures were taken. The first of these laws facilitates the voluntary conversion of the bonds of credit associations at 4 $\frac{1}{2}$ per cent. and 5 per cent. into new bonds at 4 per cent. and prescribes, in order to bring about the conversion, that no interest higher than 4 per cent. shall be paid or received in the case of loans on the security of real property granted out of funds placed under public control or under the control of the authority that supervises the investment of trust funds or out of funds that are administered in conformity with the regulations for the investment of the property of minors.

The law on the fixing of rates of interest provides that no interest higher than 4 per cent. can be paid or received in respect of loans granted on the security of real property unless a special authorisation has been obtained and that no authorisation of this kind can be granted for a higher rate of interest than 5 per cent. per annum for such loans.

Under the terms of the law of December 1933 facilitating the conversion of the bonds of the credit associations, a total of about 800,000,000 crowns of bonds at 4 $\frac{1}{2}$ and 5 per cent. was to have been converted into bonds at a lower rate of interest, and this represented about 25 per cent. of the total issue by all the credit companies of bonds at the said rates of interest.

The conversion was not, however, carried out, the savings banks not considering, in the Spring of 1935, that they could support it.

After the measures for conversion had been presented, Law No. 126, of 21 April 1936, on agricultural debts was approved. By this law 100,000,000 crowns was made available for the conversion of old debts regarded as particularly burdensome.

The loans are granted on favourable conditions: freedom from payments up to 1 January 1942, and afterwards payment by instalments. The rate of interest is fixed at 1 $\frac{1}{2}$ per cent. for the first two years and at 4 $\frac{1}{2}$ per cent. afterwards, to be paid, however, according to the economic conditions.

To obtain the loan, it is necessary to be owner of a farm, acquired, as a rule, before 1 January 1933, and the debt must exceed the mortgage value of the property by at least 10 per cent. The loan cannot exceed 25 per cent. of the mortgage value of the property and must be guaranteed by a mortgage not exceeding 10 per cent. of the value of the property.

Owing mainly to the measures taken in favour of agriculture, the economic situation of the Danish farmers has improved of late. Also of great importance, however, has been the fact that the fall in the prices of agricultural products, which was one of the principal causes of the crisis, has gradually given place to a certain rise.

Norway.

The Debts Commission estimated the agricultural mortgage indebtedness of the country in 1926 at 1,471,000,000 crowns, which corresponds to 32 per cent. of the value of the rural holdings. The total agricultural debts amount to 47.5 per cent. of the free market value of the farms. The Central Statistical Bureau has made an enquiry in typical regions of the country. The farms forming the subject of this investigation numbered 150,000, that is, half the total number. Their aggregate indebtedness (lands and forests) amounts to 45 per cent. of their value. The debts are for the most part mortgage debts (80 per cent.). The small holdings are, generally speaking, the most heavily burdened.

It must be noted that, in recent years, the farms that have been forcibly sold by the creditor banks, have almost always been afterwards resold to their former owners or to relations of the former owners and that only a minority of farms is overburdened with debts. Thus nearly 50 per cent. of the total indebtedness affects only 20 per cent. of the farms.

On 29 June 1934, a provisional law, No. 12, on the adjustment of the debts of farmers was promulgated in Norway. The fundamental provision of this law is the establishment of an agricultural credit bank formed of two sections, the section for the adjustment of debts and the section for the conversion of loans guaranteed by mortgages on farms (1). Each section has at its disposal a working capital formed out of State funds.

The loans are granted for the voluntary or compulsory regulation of debts.

Loans of the first kind may be granted to farmers who cannot, by other means, obtain a loan on reasonable terms, on condition that the loan should be utilised to negotiate an arrangement for the extinction of the existing debt. This condition is imposed with the object of enabling the applicant to keep possession of the property that he risks losing in the event of foreclosure or distraint. To put him into a position to fulfil his engagements after the arrangement above mentioned, the banks even grant loans for the acquisition of farming requisites and for the repair of buildings, where that is necessary with a view to the scientific farming of the holding. In the event that the applicant has occupied or occupies several independent holdings, the loan bank as a rule only assists him to keep a single holding. The loans granted for the voluntary adjustment of debts cannot exceed 15,000 crowns, and, further, they must not

(1) In accordance with an amendment contained in a Law of 25 June 1936, conversion loans may also be granted for the redemption of debts not guaranteed by mortgages.

exceed 30 per cent. of the value of the farm as valued by a special committee. The loan once paid, the total mortgage debts and the remaining obligations of the applicant must not exceed a certain limit, so that he can be considered capable in the future of meeting his engagements. As a rule, the debt must not exceed the value of the applicant's real property by more than 20 per cent. The loans for the voluntary adjustment of debts will be guaranteed by a mortgage on the farm including the implements, the machines, the livestock, the crops and the manures which are on the farm and remain on it.

In the event that a farmer has not been able to come to a voluntary arrangement on the basis of the prescriptions outlined above, the council of administration of the loan fund can authorise a compulsory arrangement for the reduction of debts. It is, however, necessary for the application of this measure that the arrangement proposed by the debtor should be equitable in the opinion of the council of administration and that the mortgage debt burdening the property of the debtor should not be larger than the probable selling price. If the amount of the mortgage debt exceeds the probable selling price, the administration of the loan bank must insist that a reduction of the debt shall be obtained.

The section for the conversion of debts of which we have just spoken can only grant a loan in the event that, without such a loan, the farmer would lose his farm, or in order to give him the possibility of freeing himself from a mortgage debt on which the rate of interest is higher than he is in a position to pay. Loans of this kind cannot exceed 25,000 crowns and they must not represent more than 30 per cent. of the estimated value of the farm. The loan will be guaranteed by a mortgage on the land owned by the borrower, up to a limit of 80 per cent. of the estimated value. In cases in which a farmer is granted out of the fund both a conversion loan and a loan for the voluntary adjustment of his debts, the total amount of the two loans must not exceed 15,000 crowns.

Sweden.

The Central Bureau of Statistics carried out in 1933 an enquiry into the indebtedness of the farmers. The number of farmers whose position was inquired into was 368,655. It resulted from the inquiry that their distribution according to the percentage of indebtedness incurred to meet farming expenses was as follows:

26.3 per cent. had no debts;									
7.4 per cent. had debts up to 10 per cent. of the total assets;									
11.1	»	»	»	from 10 to 25 per cent. of the total assets;					
17.9	»	»	»	»	25	»	50	»	»
15.7	»	»	»	»	50	»	75	»	»
12.1	»	»	»	»	75	»	100	»	»
9.5	»	»	»	of more than 100					

The average of all the debts was 41.6 per cent. of the total assets.

The Statistical Yearbook of Sweden (1) publishes in addition the following figures on the aggregate mortgage debt of agriculture at the end of the years indicated:

Year	Crowns	Percentage of the assessed value
1913	2,287,330,008	47.6
1918	2,782,065,091	36.8
1922	4,359,882,914	46.0
1928	4,850,288,521	47.4
1932	4,896,557,000	46.3
1933	5,000,935,000	49.0
1934	5,021,138,000	48.8

As the crisis deepened, the State was obliged, in 1932, to grant a sum of 15,000,000 crowns, partly for what are called "agreement loans" and partly for what are called "assistance loans." Parliament decided in 1933 to grant such loans also during the period 1 July 1933 to 30 June 1934 and assigned for that purpose the sum of 10,000,000 crowns. In regard to the agreement loans it was laid down that the creditors who take part in the agreement may receive, in place of 60 per cent., as previously, 70 per cent. of their total claims. As to the assistance loans, according to the new provisions their amount was reduced to 750 crowns and they must be used primarily for the payment of debts other than those relating to loans from the State loan fund for small holdings.

In 1934, Parliament again voted 8,000,000 crowns to be used during the financial year 1934-35 for agreement loans and assistance loans.

Lastly, for the special assistance of the indebted farmers, Royal Order No. 277 was issued on 7 June 1935. It provides that for this purpose loans may be granted for the conclusion of agreements and, in the second place, for preventing the forced sale of the real property of the debtors or of their dead or live stock. The loans granted with a view to the conclusion of agreements cannot exceed the sum of 800 crowns. Loans granted in order to prevent forced sale cannot exceed 30 per cent. of the value of the real property of the debtor. During the first two years, the loans are free of interest; the rate of interest is afterwards fixed at 4 per cent.

In general, the position of agriculture from the point of view of indebtedness has appreciably improved since 1933, owing to the favourable movement of agricultural prices and to the measures taken on behalf of agriculture by the State. The debts of the farmers to commercial banks amounted, in fact, in March 1932, to 319,000,000 crowns and in August 1934 to 284,000,000 crowns. Moreover,

(1) STATISTIK ÅRSBOK FÖR SVERIGE, 23rd year, 1936. Central Bureau of Statistics of Sweden.

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the number of bankruptcies amongst farmers, which numbered 846 in 1932, fell in 1933 to 574 and to 221 in the first half of 1934.

A Royal Commission is now engaged in studying the problem of agricultural debts.

Finland.

During the crisis, agriculture suffered so much that the farms that for their working had had recourse to borrowed capital found themselves in a very difficult position. The proof of this was the number of forced sales, which was as follows in the period 1931 to 1935:

1931	1,623
1932	2,526
1933	3,296
1934	2,651
1935	2,020

The aggregate indebtedness of agriculture was estimated at the end of 1929 at 5,920,000,000 Finland marks. Out of this sum, 1,135,000,000 marks, or only 20 per cent., represented long term loans, while the remainder consisted of short term loans. This compelled the Government to contemplate in the first place the conversion of short-term debts into long-term debts.

For this purpose (1), a law was voted in October 1931 concerning the reorganisation of the Land Mortgage Bank (*Maankünteistöpankki*), by which its capital was raised from 4,000,000 to 20,000,000 marks; of this sum, 8,000,000 marks was subscribed by the Government, which was also authorised to guarantee the bonds issued by the Bank up to the amount of 200,000,000 marks. The Land Mortgage Bank could grant to distressed farmers mortgage loans up to 70 per cent. of the value of their real property and up to 30 per cent. of the value of their personal property and of forests. It soon became clear, however, that satisfactory results could not be obtained unless these limits were considerably extended. Consequently, a new law on the consolidation of agricultural indebtedness, dated 17 February 1933, authorised the Land Mortgage Bank to grant loans up to 90 per cent. of the value of the farm and, in the event that the farm of an applicant for such a loan were forcibly sold by auction, to buy in the farm in question and to transfer it to the former owner or to his representatives. At the same time the capital of the Bank was raised to 30,000,000 marks, of which 18,000,000 marks were subscribed by the Government; the guarantee of the Government for bonds to be issued by the Bank was extended to 300,000,000 marks.

(1) J. K. KONTTINEN, B. C. L., Councillor of the Ministry of Agriculture: Measures for Combating the Agricultural Depression in Finland. Helsinki, 1936.

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The operations for the consolidation of agricultural debts, which had been begun in 1931, were continued up to the end of 1936. The Land Mortgage Bank began this work in October 1931, and the number of applications for loans received up to the beginning of 1936 was 18,493, of which 6,818, for a total sum of 459,400,000 marks, were approved.

In 1934, a law, dated 10 January, authorised the Bank to extend its sphere of operations and to buy in the farms sold at any forced sale by auction. With certain exceptions it had, moreover, the right to pay the purchase price in the form of bonds guaranteed by the State at their nominal value, unless the creditors consented to leave the capital sum due to them as a permanent loan up to the end of 1935, at a fixed rate of interest bearing a reasonable proportion to the current rate of interest on deposits. The farm bought in by the Bank is, partly or wholly, either transferred against a mortgage guarantee to its previous owner, his wife or his relatives, if these persons are fit to assume this responsibility and have the intention to make of the farm their principal means of livelihood, or else taken over by the State for purposes of colonisation on payment of the same price as that at which the farm had been bought in by the Bank.

From January 1934 to the beginning of 1936, the Land Mortgage Bank bought in 2,366 properties at the price of 123,600,000 marks.

By yet other measures, provision has been made for improving the situation of the indebted farmers. Thus a law voted in January 1930 on forestry undertakings enables the owners to obtain long-term credits on the security of their forests.

A measure voted in February 1932 provided that an arrangement could be imposed by a majority of creditors on a dissentient minority.

Lastly, another law, voted in April 1932 and intended to remain in force up to the end of 1936, forbids the levying of distress on the agricultural implements indispensable for the cultivation of the land.

It must be said that latterly the position of the farmers has improved to such an extent that between 1932 and 1934 the average net return per hectare for the whole country increased from 474 to 528 marks and the return on the capital invested from 4.6 per cent. to 6.1 per cent.

The index-number of the prices of animal products rose from 70 in 1934 to 75 in 1935 and to 80 in February 1936 (1926-28 = 100). The price index of agricultural products was also 70 in 1934 and 75 in 1935, but 79 in February 1936.

The prices of forest products also show a tendency to increase.

While the agricultural return rose between 1933 and 1935, the rates of interest fell, particularly to the advantage of the indebted farmers. In fact, while they had to pay at the beginning of the depression 8 to 12 per cent. interest on their debts, they can now obtain loans at from 5 to 7 per cent.; the State can even grant loans at lower rates of interest in special cases.

(to be continued).

G. COSTANZO

ECONOMIC CONDITIONS AND POLICIES AFFECTING AGRICULTURE DURING THE WORLD ECONOMIC DEPRESSION

PHASES OF THE DEPRESSION AND RECOVERY IN AUSTRALIA

(concluded) *

IV. — FIRST PHASE. RESISTANCE.

We have previously noted that the Federal Government already before 1929 was beginning to doubt whether the Australian tariff policy, which had become almost an article of faith among the bulk of the Australian people was not requiring some kind of investigation and revision, and whether tariffs should not be reduced, or at least whether any further rises should be checked. Not only in the sphere of tariff policy but also in various other spheres of Australian economic organisation doubts on the part of the Government were being expressed. The Government was actually defeated at the end of 1929 on the proposal to abolish the Federal Arbitration Court and to hand over industrial relations to the States. The ensuing election returned the Labour Opposition, which was pledged to uphold Australian standards of life by the traditional Australian methods of heavy tariffs and high wages, held to be means of preventing unemployment and a decrease in purchasing power of the people. It is therefore understandable that the first attempt to overcome the crisis should, coincident with its outbreak, involve a policy of resistance rather than of adjustment.

One means of resistance however was also a means of overcoming one aspect of the crisis, *i.e.*, the tariff was one means of reducing the adverse balance of trade. The first changes in the tariff made by the new Government in November and December 1929 were of a more or less straightforward protective character. As however the crisis in the balance of payments developed in 1930, additional measures of import restriction of an emergency character were adopted. In April an emergency tariff was introduced which completely prohibited certain imports, rationed others and imposed a 50 per cent. surtax on the duty already obtaining on a third class. This measure primarily affected goods of a luxury character or which were not regarded as indispensable, though certain kinds of agricultural machinery were affected. The measure was definitely asserted to be temporary and to meet an emergency which was expected to pass.

As we have seen, however, the emergency had reached its gravest point by the middle of 1930, and consequently in the ensuing year further steps of the same character were taken. The July 1930 Budget imposed a new kind of duty called a "primage" duty which was in fact but a simple import duty of 2 ½ per cent. *ad valorem* on all imports, with a few exceptions. At the same

* For the first part of this article, see previous number of this Bulletin (January 1937).

time a "sales-tax" of another $2\frac{1}{2}$ per cent. was imposed on all goods, but a number of exceptions including most agricultural staples and a number of household goods were made. In November 1930 the primage duty was increased to 4 per cent. whilst more tariff increases occurred on manufactured goods, many of them normally purchased by farmers.

Two other factors, however, were working during the year to turn an unfavourable balance of trade into a favourable one, factors which in a sense were remedies provided by the crisis itself, namely the depreciation of the exchange and the falling off in internal income. At the end of 1929 Australia was effectively driven off the gold standard. By March 1930 the rate of exchange was £106 6s.3d. Australian to £100 sterling. The peculiar interaction of economic forces during the crisis is illustrated by the fact that whereas the depreciation of the exchange made imports more expensive and was one of the main influences reducing imports, at the same time it increased the burden of Australian debt. The drop in national income in 1930-31 could be reckoned at a further £80 millions, and this too inevitably reduced imports.

The decline in imports which thus resulted chiefly from the pure economic force of the crisis and only partly as a result of Government policy amounted to about £70 million, imports in 1930-31 equalling only £60.6 million as compared with £130.8 million in 1929-30 (1). Exports also however dropped very considerably, as a result of further heavy falls in the overseas prices of wheat and wool and in spite of the fact that the quantity of wheat exported more than doubled as a result of a record harvest. In 1929-30 exports of merchandise and non-monetary gold had equalled £100.1 million. In 1930-31 they fell again to £79.1 million. Exports thus exceeded imports by £18.7 million. This was not indeed sufficient to meet overseas interest obligation, apart from the short term obligations. During the year however another £10 millions of gold were exported leaving a deficit of some £4 million on current transactions including gold shipments.

Thus so far as the control of imports was concerned policy and circumstances occasioned a necessary reduction. Neither policy however nor general circumstances were favourable to an easy solution of the other major problems which have been indicated.

The problem of Government finance which resulted from the crisis is of interest here principally in respect to the light it throws on the dominant tendencies throughout the crisis both of policy and of the general situation. We cannot here indeed discuss the correctness or otherwise of various theories of public finance during a crisis, particularly the opposing views which hold, either that during times of depression Governments should make every effort to balance their budgets by cutting down expenditure or that Governments should endeavour to keep up economic activity by increased expenditure, even if this leads to unbalanced budgets. Australia however has been of interest to practical producers and to theorists in that it has provided some sort of testing

(1) British currency values.

ground for both theories, though, owing to the difference in circumstances in 1932, as compared with 1930 and 1931, the result has been somewhat inconclusive. The Federal Labour Government was indeed returned not explicitly on the second theory but on a programme which would, in the crisis conditions ruling, involve such a theory.

The difficulties of the Government were already in February 1930 such that an appeal for credit in London led the Bank of England to send out Sir Otto Niemayer to study the situation and advise the Australian Government. By the time he arrived, in July, the financial year had ended with the deficits mentioned above and short term internal and external indebtedness had mounted up. Sir Otto Niemayer's advice was straightforwardly deflationary. At a Premiers' Conference in Melbourne he painted a black picture, describing, current deficits and future obligations and attributing much of Australia's difficulties to the high level of costs as a result of tariff policy. The representatives of the seven governments then "declared their fixed determination to balance their respective budgets." It should be noted that this policy was more acceptable to governments which represented parties which were in a minority in the Commonwealth Parliament than to the Federal Government itself. Indeed in July the Commonwealth Government, after having declared a deficit for 1929-30 then proposed to increase expenditure in 1930-31 by nearly £3 million. The New South Wales Government was later defeated on the programme of the conference, and the Labour Government of Mr Lyons took its place, thereafter New South Wales becoming the centre of resistance to a deflationary policy.

In spite therefore of the officially stated policy of deflation the gap between revenue and expenditure was allowed to continue to increase. By 31 December 1930 the deficits of Commonwealth and States together for the half year amounted to £22.7 million, which has increased to £36.7 million in April 1931. Suggestions made at a conference of Prime Ministers in February 1931 to reduce Government expenditure by £15 million over three years were rejected. The Federal Government treasurer put forward proposals to reduce the gold backing of the currency and to expand credit. This plan was prevented however by the Senate from being put into operation. The same tendency was even more evident in New South Wales, where a movement developed which favoured default on overseas interest rather than the reduction of expenditure, and which actually resulted in the State defaulting from March 1931, the debt being, however, settled by the Federal Government. The financial year finished with total budget deficits of £31 million whilst the floating debt had risen to £58.7 million.

In some countries an inflationistic financial policy involved in the sphere of production a complementary policy of restrictionism designed to maintain prices. In a country whose exports form an important part of the total production the success of such a policy depends on the country being able to influence world prices to a sufficient extent to make it worth while, or to be able to compensate for the loss of external trade in some other way. In this first period of crisis in which there was as yet no possibility of international agreement to

restrict supplies as a whole, Australia considered, undoubtedly correctly, that the conditions necessary for a policy of restrictionism were not present. It is interesting to note a distinction, which is often made by Australians, between the progress of Australian agriculture since the war and the progress of some of her competitors, particularly the North American, namely that the growth of Australian agriculture was less occasioned by the war than by natural economic conditions which may be regarded as permanent, whereas the growth in some parts of North America was particularly due to war and post war conditions and the European decline, and would necessarily be checked as Europe recovered. Another argument which also was responsible for the lack of faith in restrictionism was that whereas, given world conditions, restrictionism would not succeed in appreciably improving the situation, it would effectively prejudice the recovery since the stocks held would burden the market at the first signs of recovery. Again, Australia's position as a debtor country precluded measures which would reduce her export trade.

Be that as it may, it is important to note that Australia has held almost throughout to a policy of maintaining production and keeping carry-over at a minimum. Australian policy in this field has throughout been one of maintaining increasing supplies as much as nature would allow, in the hope that a large supply would offset the fall in price. The Governments of all periods favoured a policy of making up by various forms of relief the losses to the farmers made on an increased production rather than to pay probably equally large sums to farmers to restrict production. It was considerations such as these that led to the campaign encouraged by the Government to grow more wheat in 1930-31. The area under wheat rose from 15 million acres in the previous year to 18.2 millions. The yield also was higher than normal, with the result that the crop increased enormously, from 127 million bushels to 214 millions.

Farmers had indeed been encouraged to believe that they would receive some kind of bounty or a guaranteed price, for the 1930-31 season. Though various schemes of this were put forward none were adopted, partly through opposition to the technical features of the scheme and partly as a result of the financial stringency in 1931. It was only at the end of 1931 that plans were made for distributing something like £300,000 on the 1931-32 crop. In spite of the enormous increase in production the gross value of the crop in 1930-31 was less than in the previous season.

The wool clip similarly was higher than in the pre-crisis years, though it fell by 2.4 per cent. compared with 1929-30. Prices fell down to the beginning of 1931 and the clip fetched £27.6 million as compared with £33.9 million in 1929-30, a decline of 18.4 per cent. The absence of a restrictionist policy is shown by the fact that in July 1931 only 47,000 bales remained unsold, out of a clip of 2,800,000 bales. Again, the 1931-32 clip was almost entirely disposed of by November 1932. It is interesting to note that in June 1931 a Wool Conference held at Melbourne adopted a resolution to the effect that "any scheme which has as its basis an arbitrary fixation of prices would not be in the general interests of the wool growing industry."

In spite of price falls exports of mutton and lamb and of butter increased considerably during the whole period of the crisis, compensating the falling off in frozen beef exports.

The general situation of the farmer continued to worsen, particularly since costs obstinately refused to follow prices. Even by the middle of 1932 costs of wool were still estimated to average about 1s.-3d. per lb., whilst the price in 1930-1931 had only averaged 8.36 pence per lb., and in 1931-32 8.46 pence per lb.

V. — SECOND PHASE: COMPULSORY ADJUSTMENT.

In the first half of 1931 a number of events occurred which indicated that adjustment to the crisis as opposed to resistance to it was beginning to be imposed by force of circumstances. The Federal Arbitration Court, which is the highest wage fixing authority in Australia (1), awarded reductions of wages amounting to 10 per cent. over a wide group of occupations, in which wages were governed by the cost of living. The court did not confine itself to adjusting wages according to statistical movements but took also into account facts such as the decline in national income, the growth of unemployment and the general worsening of the economic situation. This measure was the signal for a series of such reductions by the various State courts, throughout 1931 and 1932, with the exception of New South Wales, where, as we have noted, resistance to adjustment of a deflationary kind was strongest. It lasted indeed until the removal from office of the Prime Minister in March 1932 by the State Governor.

The second event was the fixing of the exchange rate at the low level of £A130 to £100 sterling at the end of January 1931. This again was a measure imposed by circumstances, and not the result of a clearly thought-out policy. In October 1930 the rate had been "pegged" by the Commonwealth Bank at 9 per cent. discount. But as the demand for sterling grew, the pressure on the exchanges increased, and an "outside" market in sterling began to develop. At the beginning of January 1931 the Bank of New South Wales began buying at 15 per cent. discount. Even this did not stop the fall on the outside market and in the course of three weeks the official rate was then changed to 18, 25 and finally 30 per cent. discount, where it remained until after Great Britain had left the gold standard.

Thirdly, it had become quite clear that, for the time being at least, there was no further possibility of raising loans in London. The Commonwealth Prime Minister, who was in London attending the 1931 Imperial Conference and who at the same time was prospecting for loans, was unable to overcome the distrust in the financial soundness of Australia, nor, in view of the inflationary programmes being put forward in Australia, could he persuade London that the necessary efforts were likely to be made to put Australia on a sound financial basis. Help therefore from this side was not to be expected.

(1) The court has jurisdiction however only in cases of national awards or inter-state disputes.

A similar attitude of distrust on the part of the Australian banks was manifested at the end of 1930 and again in April 1931. A statement was made at the end of 1930 by a meeting of the Banks, called by the Commonwealth Bank, to the effect that "unless effective steps are immediately taken by the Governments of Australia to balance their budgets and reduce costs, the time is coming when banks and other financial institutions will be unable to assist the Governments to meet salaries, wages and other commitments except at the expense of widening the gap already in existence between the costs and the returns from Australian industries." It protested that if Government demands on the banks continued they would be obliged more drastically to cut down credit to producers. "The banks are unable to accept such a policy as sound, and can accept no responsibility for the consequences which must inevitably follow unless there is drastic curtailment of Government expenditure and an active co-operation by Governments in the reduction of costs." In April 1931 a further warning was made by the banks in the light of the deficits which were visible, pointing out the further growth of financing by Treasury Bills.

These circumstances indicate the background of pressure out of which materialised the so-called "Premiers' Plan" of 1931, which manifested the practical acceptance on the part of all Governments—other than that of New South Wales—of the necessity of a deflationary policy. The plan itself was based on a report prepared by a number of economists and financial authorities and discussed at a Premiers' Conference beginning in May 1931 and lasting for three weeks.

Since this plan embodied the most important measures of policy during the next three years, it is well to describe it in detail. According to the report embodying the plan, national income had fallen by £200 million; and Government finance had suffered in consequence. Deficits of the seven Governments were expected to amount to £31 million for the financial year 1930-31. Deficits had hitherto been met by bank overdrafts. The Commonwealth Bank had notified the Government that the limit to that process had been reached. The Governments were threatened with being unable to meet their obligations—interest salaries, etc.

"The Conference has, therefore, adopted a plan which combines all possible remedies in such a way that the burden falls as equally as possible on everyone, and no considerable section of the people is left in a privileged position." The plan included, in summary:

- (a) A reduction of 20 per cent. in all adjustable Government expenditure.
- (b) Conversion of the internal debts of the Governments on the basis of a 22 ½ per cent. reduction of interest.
- (c) The securing of additional revenue by taxation.
- (d) A reduction of bank and savings bank rates of interest in deposits and advances.
- (e) Relief in respect of mortgages.

These measures were estimated for 1931-32 to reduce expenditure by £12 million, to increase Federal taxation by £7.5 million, to reduce the interest burden on the budgets by £5.5 million. "The combined effect will be to re-

duce the estimated total deficits for 1931-32 from £40 million to only £15 million."

"These very substantial reductions will go far to restore confidence both at home and abroad. This restoration of confidence, with the indirect effects of the fall in the rate of interest, may be expected to restore revenue, even to some extent in 1931-32, and substantially in the years following. A rise in world prices for our exports would accelerate the upward movement, and this rise may reasonably be expected within the next two years....

"With this prospect, and confidence restored, there would be no difficulty in borrowing temporarily to meet the deficits as substantially reduced.

"The deficit includes £10.6 million additional charge on overseas interest and external payments on account of exchange. If the exchange rate falls, there will be a corresponding decline in the deficit. On the other hand, if the present exchange rate is maintained its full effect in keeping up local prices and incomes will have a beneficial effect on Government revenues."

Thus the plan, which consisted in reducing Government deficits, expected this to have an effect primarily on confidence, which would enable necessary borrowings to be maintained. By endeavouring to encourage a policy of cost reduction, and with the aid of the beneficial effects of the exchange and of a rise in external prices, the Governments hoped that the major features of the crisis would have disappeared. The plan itself therefore was deflationary, but based its prospects of success on external factors which would lessen the severity of such deflation. Broadly, as the sequel will show, the recovery did occur in in this manner. Governments did reduce their deficits, but short term borrowings actually increased, the action of the exchange caused a more favourable movement in prices, and eventually world prices themselves began to rise with favourable results on the Australian economy.

The possibilities of applying this plan were increased by the return, at the general elections in December, of a new Federal Government, under Mr. Lyons, the leader of the United Australia Party which was pledged not only to apply the Premiers' Plan in full but to carry out that revision of the tariff which already in 1929 had been shown to be necessary, tariff revision and reduction thus being recognised as part of the process of reducing costs of production in agriculture.

VI. — CONDITIONS AND POLICIES AFTER THE INITIATION OF THE PREMIERS' PLAN.

Thus already by the end of 1931, Australia appeared to be well on the way to the solution of that part of the problem, brought by the crisis, which was of a financial character. This could not however mean an immediate and widespread recovery in internal economic conditions. The conditions necessary to financial recovery were not directly compatible with the wider economic recovery. Indeed it can be asserted that the opposite was the case, that retrenchment of Government expenditure would at least temporarily worsen the situation. Again, the exchange depreciation, valuable as it was in restoring the necessary active balance of trade was, at the same time, by diminishing imports, bound

to reduce industrial and distributing activity. Thus it was that industrial unemployment continued to rise after the initiation of all the policies of wage reduction, Governmental economy and exchange depreciation. The percentage of the members of trade unions unemployed had risen from 11 per cent. in 1929 to 19.3 per cent. in 1930. In the first quarter of 1931 it had risen again to 25 per cent. and by the third quarter of 1931, to 28.3 per cent. It was not until the third quarter of 1932 that the tendency was reversed, the percentage falling from 30.0 per cent., the maximum reached in the second quarter of 1932, to 29.6 per cent. Thereafter the fall continued regularly down to the present.

Again, though the reduction in costs throughout the country was likely to improve the situation of the farmer, without the repercussions from the decline in purchasing power having as serious an effect as in industry, which is entirely dependent on the home market, conditions in the overseas world, far from showing a tendency to improve, were, throughout 1931, steadily worsening. 1931 was the year of banking and currency collapses in Europe and in the East; in fact in all Australian markets. After a series of banking failures on the European continent and after the British financial structure began to appear to be shaken, Great Britain abandoned the gold standard; and was followed by a whole series of countries which depended to a large degree on the British market, or which wished to maintain their competitive capacity on other markets to which British countries were exporters. Those few countries which did not abandon the gold standard intensified their protective policy and in some cases adopted systems of exchange control which enabled them to discriminate in favour of "good customer" countries or against "bad customer" countries. Australia, whose currency was already depreciated with respect to sterling by 30 per cent., did not want a return to parity, and consequently in December 1931 adopted the rate of £A125 to £100. This, it should be noticed, involved an increase in the discount on gold, a fact which contributed subsequently both to the strained relations between Australia and the gold countries and towards the intensification of the system of Imperial Preference to which Australia had already subscribed since the war. In January 1932 the price of Australian wool was 9.4 pence per pound in Australian currency, 7.5 pence per pound in sterling and 5.3 pence per pound in gold. If Australian goods were cheap to the countries of the "gold bloc" their goods were expensive to Australia. It is small wonder that Australia was the subject of special import duties and regulations by European countries in the very years in which it was emerging from the depression.

The chief point however with which we are here concerned is that in spite of certain favourable tendencies and of a policy of adjustment to the crisis, internal economic recovery was likely to be delayed owing to the worsening of the situation in overseas markets and a diminution in the purchasing power of European countries whether through exchange depreciation or protective measures.

Before the end of the fiscal year 1931-1932 it had become clear that the problem of the balance of trade had been solved. The year ended with a favourable visible balance (excluding monetary gold) of £35 million sterling. Some £5 million sterling monetary gold were exported, giving a total favour-

able balance of £40 million much more than sufficient to pay overseas interest, and making possible the building up once more of London reserves necessary to meet the requirements of small harvest years. Still measured in sterling, merchandise exports declined from £76.5 million to £75.5 million but imports declined from £60 million to £44.11 million.

The effects of the exchange rate can be seen particularly clearly from the following figures of exports and imports (including all gold) expressed in British currency values and in Australian currency values.

Year	Total imports		Total exports		Balance	
	£ million	£ A million	£ million	£ A million	£ million	£ A million
1929-30	131.1	131.1	125.1	125.1	— 6.0	— 6.0
1930-31	68.8	61.0	104.9	89.3	+ 36.1	+ 28.3
1931-32	57.0	44.7	108.4	85.3	+ 50.6	+ 40.6

Thus in both years 1930-31 and 1931-32 when, as we have seen, the trade balance became active, total imports declined, measured in both sterling and Australian currency, but in each year more heavily in terms of sterling. On the other hand, whilst total exports, measured in sterling, somewhat declined in both these years, they actually rose in 1931-32, measured in Australian currency, for the first time since the outbreak of the crisis. The increase was indeed small but the significance lies in the tendency and the additional currency made available to exporters. It will be noted that in 1931-32 Australia received an additional £23.1 million through the depreciation of the exchange.

The exchange depreciation did not cause a durable price rise in the principal agricultural export products of Australia, though these had shown a favourable tendency at the end of 1931. Rather, it is important to note, the depreciation prevented the steep fall of prices on the world market being transmitted to Australia. Thus average prices of greasy wool expressed in Australian currency, in sterling and in gold moved as follows:

	Australian currency Pence per lb.	Sterling Pence per lb.	Gold Pence per lb.
1929-30	10.29	10.29	10.29
1930-31	8.36	6.96	6.96
1931-32	8.46	6.69	5.10
1932-33	8.72	6.98	4.84

Thus whereas prices in Australian currency somewhat rose, prices were still falling in sterling and gold, most heavily of course in the latter. Again, wheat prices rose from an average of 2s. 5 ³/₄d. per bushel in 1930-31 to 3s. 0 ¹/₄d. in 1931-32. Whereas sterling prices also rose somewhat as a consequence of the

abandonment of the gold standard by Britain, gold prices continued their precipitous decline.

The solution of the internal agricultural problem still depended fundamentally on a better relationship between prices and costs. So long as prices remained at the 1931 and 1932 levels hope could chiefly be expected from cost reductions.

The process of cost reduction which had been shown both in theory and practice to be so necessary was accentuated with the application of the Premiers' Plan. Wages, as we have seen were being reduced throughout 1931 and 1932. In the same period certain adjustments were made in other directions tending to reduce the burden of transport and marketing costs. In various States reductions were made in railway freights. The clauses in the Premiers' Plan relating to interest rates occasioned appreciable relief to farmers, whilst in some States moratoria and other forms of debt relief were granted by legislation. In accordance with this general tendency was the removal or reduction of a number of the special tariff provisions which had been introduced under the pressure of the crisis in 1930 and 1931. Beginning in February 1932 and continuing in August and September of the same year, and subsequently, a number of articles on the lists affected by prohibitions, primage duty and surtax were exempted. One part of the declared programme of the new Government which came into office at the end of 1931 was a substantial reduction and revision of the tariff, and a start was indeed made in this direction. But before this movement went very far tariff policy became dominated—as in the rest of the world—by another purpose. The aim of cost reduction through tariff revision became secondary to the aim of securing an assured export market through tariff bargaining. The Ottawa Agreements of August 1932 resulted in an intensification by Australia of the policy of British Imperial Preference which it had pursued since the foundation of the Commonwealth. In return for concessions offered by the United Kingdom Australia increased the tariff preference on a long list of goods—not however by reducing the British Preferential tariff, but by increasing the General tariff affecting goods of non-British origin. Tariff and trade policy in the period succeeding the Ottawa tariff did not follow very clear lines. Reductions in the general tariff which were proposed during 1932 and 1933 were not finally made effective until the end of 1933. On the other hand the policy of protecting particular industries both against British and foreign competition continued, particularly in the case of cotton textiles. On the whole, however, the tariff began to show by 1933 a slight downward movement (1). But the most consistent feature was the preference given to the United Kingdom producer over foreign rivals. In a number of cases the preference on individual items was increased. One of the most interesting examples of preference was the Exchange Adjustment Act which resulted from an enquiry of the Tariff Board into the protective effects of the exchange rate. The Board expressed the view that "The exchange... has increased the protection afforded local

(1) Crawford. *The Tariff Level Indices*. The Economic Record 1934.

industry well above the rates which must have been considered reasonable when adopted by Parliament." (1)

The Act, assented to in December 1933 provided however for certain downward adjustments of duties only in the case of goods to which the British Preferential tariff applied. The reductions were to vary according to the extent of the depreciation. These various forms of discrimination against foreign countries as well as the application of a number of dumping duties, undoubtedly were partly responsible for a number of retaliatory measures taken by some European countries during 1934 and subsequently. As the events of 1936 show, Australia has not yet emerged from the period of tariff disputes (2), which have particularly characterised the depression.

The progress towards the solution of the external problems which has been noted and the prospects of restoration of sounder internal conditions tended to make more appropriate an agricultural policy which helped to tide farmers over the crisis, rather than a fundamental re-organisation. This was particularly the case as regards the second most important branch of agriculture — wheat growing. Thus, side by side with the other forms of relief granted, bounties were given in 1931-32 and 1932-33 amounting to £3,414,000 in the former year and £2,000,000 in the latter year. In 1931-32 the bounty was given on wheat sold, and in 1932-33 on the area cultivated. These measures were not designed to secure an increase in production. The area under wheat indeed declined from 18.1 million acres in 1930-31 to 14.7 million in 1931-32 and to 15.7 million in 1932-33. In this latter year however the harvest was as large as in 1930-31, 213 million bushels. Proposals which were put forward in 1933 to adopt a plan for wheat growers which had been in operation for some years in other less important branches of agriculture, a plan which consisted in maintaining home prices above the world prices (in this case through a compulsory pool) was not adopted. Again in 1934 a Royal Commission on wheat recommended the plan as well as assistance by bounty. For the 1934-35 season however the Government only adopted the bounty system, which again differed from the preceding scheme, in that a certain part of the total was allotted according to wheat sold, another part according to acreage grown and a smaller part to be distributed to farmers in special need. The total sum for the season amounted to about £4 million. Thus during the crisis and depression period the policy pursued was essentially one of relief rather than putting wheat farming on a new basis. Wheat farming remained however the most unprofitable branch of Australian agriculture.

As a result of the application of the Patterson Plan for butter—which included a bounty on exports raised by a levy on butter producers—the price of which was kept up by a tariff, both production and exports increased. Since

(1) Report on "The Adjustment of Protective Duties to compensate for the effects of Exchange and Primage," 1933.

(2) These lines were written before the Japanese-Australian agreement was reached in December 1936.

however the internal market is limited, production increasingly exceeded home demand and exports increased, thus making necessary heavier levies. Whereas in 1925-26 exports were only about 28 per cent. of production, in 1928-29 they were about 35 per cent. and in 1933-34 about 53 per cent., which made the scheme financially very difficult to work. On the other hand if exports were not kept up, the surplus supplies could lead to a very heavy fall in the home price. A new scheme which was started in 1934 sought to maintain a fixed scale of prices and to control exports.

An embargo on sugar imports has been in operation since 1924. The Queensland Government has complete control of all sugar grown in Australia and is able to fix a high Australian price, much above the world price. Production, as in the case of butter, has increased beyond domestic needs. The low export price of recent years brought the Australian industry into difficulty. Schemes to limit production have not been entirely successful and since the basis of the present control is being continued until 1941, under the Sugar Agreement Act of 1935, a final solution seems to depend on better export prices.

Among other agricultural products which were assisted by bounty or otherwise may be mentioned cotton, fruits, wines and flax. Assistance to agriculture in a direct form is neither peculiarly Australian nor a result of the crisis, and since we are here concerned mainly with the particular reactions of Australia as a result of the world crisis, it is sufficient that the assistance given in these directions should be mentioned (1).

We have noted above that the "Premiers' Plan" predicted an eventual rise in the overseas price of Australia's export products, a rise which was necessary to the success of the plan. In 1932-33 however wheat prices actually declined slightly compared with the previous year, and another decline took place in 1933-34. In 1932-33, however, wool prices rose in sterling and *a fortiori* in Australian currency, but in 1933-34 they rose in Australian currency in sterling and in gold substantially—to 15.84 pence, 12.65 pence and 8.19 pence per lb. respectively. This improvement reflected the growing economic recovery in the world. As a result, in spite of a somewhat smaller clip in 1933-34 compared with the previous year the value of wool exports rose to £57 million compared with £36.4 million in 1932-33 and £32.1 million in 1931-32.

As a result of the various factors which we have outlined the years 1933 and 1934 saw a marked recovery in the internal economic situation. The Budget position of the Commonwealth and the States showed a definite improvement. The Commonwealth Budget showed surpluses in each of the three years, 1931-32 to 1933-34, amounting altogether to over £6 million. Between 1930-31 and 1933-34 Commonwealth receipts increased from £69.6 million to

(1) As regards policy with respect to meat which is chiefly governed by the Ottawa and post-Ottawa Agreements with the United Kingdom, reference should be made to the articles in the *Bulletin of Agricultural Economics and Sociology* for October and November 1935, by C. Hubback and J. K. Montgomery.

£73.9 million whilst expenditure decreased from £80 million to £72.6. The most important factor in reducing expenditure was the suspension of Australia's war debt payments to the United Kingdom, which amounted to about £5 million per annum. During 1933 and 1934 the Commonwealth was able to save over £2 million sterling per annum as a result of conversions on the London market of loans amounting to £146 million. These conversions were a tribute to the growing confidence in Australia's economic situation. On the other hand, State finance continued to show deficits, but these were much reduced. Thus total State deficits fell from £20.8 million in 1931-32 to £8.0 million in 1932-33 and £6.8 millions in 1933-34. The improvement was almost entirely due to the reconstruction of the finances of New South Wales, where the deficit fell from £14.2 million in 1931-32 to £3.6 million in 1932-33 and £3.3 million in 1933-34. This tremendous decrease undoubtedly gave an important fillip to confidence both in Australia itself and in London.

Share markets provided a good index of the extent to which confidence was revived by the successful coping with the foreign trade-balance position, and with the budget position and by the improvement in wool prices and reductions in interest rates. The index of the shares of manufacturing and distributing companies quoted on the Sydney Stock Exchange rose from 72.3 in September 1931 to 114.4 in January 1933 and 139.3 in December 1933. In December 1933 the index of the prices of the shares of 5 large pastoral and finance companies averaged 145.6 compared with 75.2 in September 1931. Similar improvement was noted in other groups, the total index for 75 companies averaging 132.4 in December 1933 compared with 74.4 in September 1931.

In the banking sphere, bank clearings and savings bank deposits increased. The proportion of advances to deposits which had increased after 1928 began in 1932 to decrease, indicating a diminished need for bank accommodation. Again, profits of trading banks improved.

Another index of the improvement of the general internal position was that in 1932-33 the value of imports rose for the first time since the outbreak of the crisis. Imports (excluding gold) rose from £44.1 million to £56.9 million. In subsequent years imports continued to rise.

In the third quarter of 1932 unemployment showed a decrease which continued throughout the succeeding years. In June 1933 the Federal Arbitration Court restored the cuts which had been made in wage rates in certain industries in 1931 giving thus the signal for further wage increases in general.

In 1932-33 the value of production rose, after it had fallen steeply during four years of crisis. In 1933-34 the rise was larger than in the previous year owing to the large advance in wool prices. The figures of total production reflect well the process of depression and recovery:

	£ million
1928-29	447.8
1929-30	389.5
1930-31	319.6
1931-32	305.0
1932-33	318.2
1933-34	355.4

CONCLUSION.

By 1934 Australia still had a long way to go before arriving at the degree of economic well-being which obtained before 1929. Nevertheless it can be asserted that Australia had made much progress towards adjusting itself to changed world conditions. What we have termed the external or trade problem was solved chiefly by the *force majeure* of the crisis which imposed the depreciation of the currency and the diminution of imports. On the other hand the internal problem was being brought under control before the rise in the price of wool itself tended to consolidate the progress which had been made. A return to the prosperity which reigned before the crisis, however, was not to be expected until world conditions returned to normal. For Australia this meant until export prices rose and the international flow of capital was resumed. In spite of the improvement in prices compared with the trough of the crisis they remained substantially below the pre-crisis level. European tariff barriers and monetary conditions have hit both wheat and wool, and the gains in Eastern markets have not been sufficient to offset the losses elsewhere. In 1934-35 wheat export prices in Australia averaged 3s. 0⁸/₁₆d. per bushel compared with 5s. 6d. in 1927-28. Prices of wool in the grease fell in 1934-35 and averaged 9.75 pence per lb. compared with 19.50 pence per lb. in 1927-28. Increases in production could hardly compensate for such declines. Australia is one of the many countries whose main hopes must lie in an eventual resumption of full international economic intercourse.

A. EMANUEL.

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[This volume contains the result of studies based on the figures relating to the production and the profitableness of Czechoslovakian agriculture during the period included between 1926 and 1930. These figures have been collected in the course of the second special enquiry undertaken in 1931 which extended to 3,044 farms distributed over the whole territory of the Republic of Czechoslovakia. It has been the endeavour of the Institute to determine how far the results obtained [are representative of the whole of the farms of the country. In making the enquiry reliance was placed in part on the principles of the representative method and in part on the monographic method. It appeared that the cultivated area of the farms under survey is larger than the average (the groups of farms of more than 100 hectares of the beet-growing regions being left out of count); that the area under arable cultivation is also higher than the average; that the area reserved for grassland, and in particular that occupied

by the grazing lands, is very limited; that the crops giving a high return (sugar-beet, wheat and barley) take an important place; that the crops giving smaller returns (rye, oats, potatoes) are much less widely represented; in other words that the proportion of the gross yield directed to the market is in the case of the farms in question above the average. These farms furthermore possess larger numbers of live stock than are owned by the Czechoslovakian farms taken as a whole. At the same time it should be borne in mind that the figures of the agricultural census are not always exact, the numbers of stock shown are incomplete. There is a significance to be noted in the difference, between the fundamental characteristics of the farms under survey by the Institute and those of the country as a whole. It has been possible, however, by analysis to determine the nature and extent of the variations of the main characteristics and the conclusion is reached that these variations cannot minimise the use that may be made of the results of the enquiry when it is proposed to arrive at scientific and practical results, and in particular when certain tendencies are the object of study.

In addition to the introduction and to the analysis of the representative value of the results of the enquiry, there are a series of tables divided into two parts, relating the one to the characteristics of the organisation and the second to the results of the farm.

The tables contain the results of the groups of farms of less than 2, of 2 to 5, of 5 to 10, of 10 to 20, of 20 to 50, of 50 to 100 and of more than 100 hectares as well as of the two intermediary groups of 5 to 20 and of 20 to 100 hectares. The farms of each region have been divided into size groups. The regions of Czechoslovakia differ in natural, economic and cropping conditions; those of the West (Bohemia, Moravia, Silesia) have attained a high degree of economic and cropping development, and the agriculture in these regions is intensive in character. The Eastern regions (Slovakia and Sub-carpathian Russia) are less advanced, and the farming there practised is extensive. The distribution of the farms under survey over the whole of the territory of Czechoslovakia is shown by a map. The introduction and conclusions are summarised in German and in French; the headings and text of the tables are translated into German and French].

J. D.

WEISS, Dr. Leonhard: Die Abmeierung. Hans Buske Verlag, Leipzig (1936). Würzburger Staatswissenschaftliche Abhandlungen, Reihe B, Heft 4.

[By *Abmeierung* is understood in the new German peasant legislation the measures taken as a whole which make it possible to deprive a *Bauer* or owner of a hereditary family farm of the right to administer and to utilise his property, and even, if need be, to deprive him of his rights of ownership in his farm. These measures may be temporary or definitive in character, and will come into effect through the loss, on the part of the *Bauer*, either of his honourable character or of his vocational capacity and skill. The word itself, as well as the conception of farm ownership on which is based the institution of the *Abmeierung*, is not an innovation; both word and idea go back to the ancient Germanic conception of right in land, according to which the soil belongs to the community and was distributed only among the families which formed part of the community and who had responsibilities in respect of it. In the interest of the community it was inadmissible that anyone should have a share in the holding of the land whose reputation or capacity was at fault. Under differing forms, partly legal, partly customary, explained in detail by the author, the institution of the *Abmeierung* was main-

tained all through the centuries even after the soil had in part become the property of the feudal lords. The *Abmeierung* naturally was not applicable to farmers who remained free owners of their farms, but these took care to maintain their own credit and to keep their land well farmed without the necessity for any measures of coercion. Changes come with the 19th century only, when the farms held under the feudal system were transformed into free peasant or family holdings. Undoubtedly in the greater number of the German States new laws were enacted which related especially to the liberated farms and also at times to the free farms of former times, particularly in connection with the choice of the principal heir (*Anerbe*). But in general the institution of the *Abmeierung* had lost all real importance and it was only after the great war that some timid attempts at legislation were made in favour of a reorganisation of the right in land, but without practical outcome. National socialism sees in the peasantry the fount of the blood of the German people. As such it must be maintained sound and strong. Legislation gives the peasant a privileged position. The principal heir inherits the hereditary peasant property in its entirety, it may not be burdened with mortgages or debts and forced sales are, in principal, prohibited. On other hand, the possibility of the *Abmeierung* safeguards the interests of creditors, since the *Bauer* who does not fulfil his engagements knows that he is threatened with loss of the right of administration and use of his property and even with the loss of the right of ownership on his farm. In the case of *Abmeierung* the administration and usufruct of the farm pass to the other spouse or to the principal heir on condition that these persons possess the requisite capacity and qualifications for farming the land. If on the other hand there is no spouse or principal heir possessing these qualifications, the tribunal (*Anerbengericht*) may transfer the ownership of the farm to another person proposed by the Chief of the peasantry who, if possible, should be a relative of the ex-owner. Provisions exist in the law which may modify the rigid application of the legal prescriptions. Thus, when the case is one of temporary deprivation of the right, the farmer re-enters on his rights after the period fixed and keeps the power of bequest. The dispossessed farmer retains the capital which he may possess apart from the hereditary family estate, but he also remains liable for his debts in so far as they do not burden this estate. The law does not expressly recognise an obligation on the part of the new owner to make provision for the maintenance of the former owner, but the tribunal may, if need be, take a decision in this sense. The basis of the *Abmeierung* is constituted by the law on peasant succession right (*Reichserbhofgesetz*) and by the regulations for its application. It is enforced by the tribunal (*Anerbengericht*) of the district in which the farm is situated.

The institution of the *Abmeierung*—writes the author—is a necessary consequence of the present form of peasant right in land. From the economic standpoint, it replaces the former possibilities of forced sale, but, in addition to its economic function, the *Abmeierung* also safeguards the vocational honour of the peasant farmer class.]

A. L.

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MONTHLY BULLETIN

OF

AGRICULTURAL ECONOMICS AND SOCIOLOGY

1937

No. 3

AGRICULTURAL INDEBTEDNESS (*continued*) (1)

C. — COUNTRIES OF CENTRAL AND EASTERN EUROPE.

Bulgaria.

The depression has shown itself in this country since 1930, beginning precisely at the moment when agricultural economy was making its first steps towards modernisation.

To form an idea of agricultural conditions, it must be recalled that in Bulgaria property is greatly split up, that each farmer is the owner of land that he cultivates with the aid of his family, that the holdings have an area of from 5 to 10 hectares, and that the peasant, who is greatly attached to tradition and unwilling to admit innovations, does not possess the necessary resources for carrying out improvements or increasing his equipment.

Now, while it is true that a long time ago a vast network of co-operative credit societies, supported by institutions controlled and encouraged by the State, was set up to supply the financial needs of the peasant-landowners, this co-operative action, extended afterwards to production, to purchase, to sale, etc., has not been sufficiently effective to raise agriculture to a higher level (2).

The year 1930 marks the beginning of a very pronounced fall in the prices of products of the soil and of animal products, which made it impossible for the farmer to pay his debts and his taxes, while his debts steadily increased through the accumulation of interest.

The serious distress of the agricultural population gave rise to two problems urgently requiring solution, *viz.*:

1. To help the excessively indebted farmers;
2. To transform agriculture and thereby to render it more remunerative.

The new government that came into power in May 1934, in fact, set before itself the following tasks:

1. To grant a large measure of protection to the principal branches of agricultural production;
2. To assure more numerous and more reliable outlets for agricultural products;
3. To provide cheaper and more accessible credit, particularly to the rural population.

(1) See the issues of January and February 1937 of this *Bulletin*.

(2) For the work of the rural co-operative societies (credit societies, tobacco-growing societies, irrigation societies, vine-growing and wine-making societies, and forestry workers societies) on behalf of the Bulgarian farmers, see the Annual Reports of the Agricultural and Co-operative Bank of Bulgaria.

The first endeavour of the Government was to raise the prices of the principal products.

With this object, a system of monopoly was introduced at the beginning of 1934 for wheat, meslin and rye, with a view to guaranteeing to the producers higher prices for cereals than the world market prices. The exclusive right to purchase wheat, meslin and rye was granted, after the introduction of the monopoly, to the Office for the Purchase and Export of Cereals. Any loss incurred was to be met out of the State budget. This measure was one of the most important measures adopted in Bulgaria as the fall in the price of cereals had been very heavy and the increase in price resulting from the operations of the Office benefited a large number of farmers.

Efforts were subsequently made to raise the prices of other products. But time was required before results could be shown; in the meantime the farmers, pressed by measures for the recovery of debts, risked losing their lands. Hence the urgent necessity of giving them relief.

The indebtedness of farmers and of other classes (workers, artisans, persons exercising liberal professions) on 31 December 1935 has been approximately estimated as follows:

	leva	leva
I. — To the Agricultural and Co-operative Bank:		
(a) Individual credit	2,464,952,000	
(b) Co-operative credit	2,559,954,000	
		5,024,906,000
II. — To co-operative societies:		
(a) Raiffeisen co-operative agricul-		
tural credit societies	1,173,165,000	
(b) Schulze-Delitzsch popular banks	401,394,000	
		1,574,559,000
III. — To private banks	1,030,000,000 (I)	
To individuals	930,009,000 (I)	
		1,960,009,000
IV. — To the State and the communes for national and		
local taxes		2,500,000,000 (I)
V. — Indebtedness of co-operative socie-		
ties to individuals:		
(a) Raiffeisen co-operative agricul-		
tural credit societies	131,149,000	
(b) Tobacco-growing co-operative		
societies	43,514,000	
(c) Vine-growing and wine-making		
co-operative societies	5,702,000	
(d) Fishermen's co-operative societies	2,556,000	
(e) Co-operative dairies	690,000	
(f) Gardeners' co-operative societies	1,056,000	
(g) Miscellaneous co-operative agri-		
cultural productive societies	10,319,000	
(h) Forestry co-oper. labour societies	10,630,000	
		205,616,000
Total		11,265,090,000

(1) Figures relating to 31 December 1930.

The first attempt to afford some relief to the indebted farmers was made by a Law dated 16 April 1932, which granted facilities for the extinction of debts by allowing a postponement of payment and by the reduction of the rate of interest and of the amount of the debt.

This Law was repealed by the Law of 2 January 1934 on the relief granted to debtors and on the adjustment of credit, which was amended on 7 August 1934.

The new law granted a large measure of relief to the debtors and gave to the creditors the assurance of recovering the sums due to them, the State intervening to pay the difference.

Debts of agricultural landowners can be reduced by not more than 40 per cent., if they do not exceed 300,000 levas, and by not more than 35 per cent. if they are larger than that amount.

The differences resulting from the reduction of the debts will be made up out of an Amortisation Fund, formed at the Public Debt Office, to which the State assigns the proceeds of the tax on vocations and the supplementary tax on total income; these amount to about 220,000,000 levas a year and are paid directly to the Amortisation Fund by the National Bank of Bulgaria.

The same Law, moreover, increased the portion of the property of farmers that is declared to be exempt from distraint for debts. In fact, in the case of forced sales, the land up to 5 hectares to be selected by the debtor, the dead stock up to the value of 25,000 levas, determined quantities of live stock, etc., are declared to be inalienable.

Additional benefits conferred by the law were:

1. The spreading of the instalments of repayment over longer periods;
2. The postponement of the date of repayment for a period of from 2 to 10 years, or even 15 years in exceptional cases;
3. The postponement for two years of the payments of amortisation instalments, interest only being paid during that period;
4. The reduction of the rate of interest to 5 per cent;

The postponement of the payments is granted in consideration of the amount of the debts, of the assets and income of the debtors.

By special measures, voluntary arrangements between debtors and creditors are encouraged.

The aid given to farmers was supplemented by the Decree-Law of 12 March 1935, which was aimed at repressing the operations of usurers. It is laid down by this decree that the rate of interest for short-term credits and for credits guaranteed by mortgage must not be more than 3 per cent. higher than the rate of discount of the National Bank of Bulgaria.

The rate of interest on loans granted to farmers by the Agricultural Bank has been gradually reduced. On 1 September 1931 it was reduced from 12 per cent. to 11 per cent.; on 1 April 1932, from 10 per cent. to 8 per cent. The new Agricultural and Co-operative Bank, resulting from the amalgamation (Decree-Law of 18 October 1934) of the Agricultural Bank of Bulgaria and the

Central Co-operative Bank, reduced the rate of interest from 8 per cent. to 7 per cent. towards the end of 1934 and from 7 per cent. to 6 per cent. in August 1935 (1).

Greece.

The indebtedness of the farmers began to become heavy even before the agricultural crisis. This was due to the mobilisations during the wars, which lasted from 1912 (Balkan Wars) to 1923 (war between Greece and Turkey), to the settlement of needy farmers and of 150,000 families of refugees who were transferred to Greece after the great war; to the scarcity of cultivable land in the country, which caused the income of the farmers to be inadequate; to the absence of a suitable system of agricultural credit, the Agricultural Bank having only been founded in 1929; to the high rate of interest, which was about 10 per cent., but has latterly been reduced to 9 per cent. and even to 7 per cent., particularly in respect of loans granted by the Agricultural Bank; to the bad harvests of 1930 and 1931 and, lastly, to the agricultural crisis, the effects of which were most severely felt in Greece from 1932 to 1935.

The total amount of the debts of the peasants and their distribution at the end of 1936 were as follows:

	Drachmas
Debts to the Agricultural Bank	2,084,145,129
» » the National Bank	164,208,678
» » agricultural co-operative societies	97,438,000
» » the Greek Fertiliser Company	18,985,000
» » various institutions	47,030,000
» » private individuals	4,830,264,000
» for the agrarian reform	1,250,000,000
» of refugees	1,150,000,000
Total	9,642,070,807

Better to judge of the conditions of the farmers, it must be noted that the agricultural income (2) for 1934, a year that is considered average both from the point of view of production and from that of prices, was calculated to amount to 19,398,000,000 drachmas. This income is divided amongst a million of rural families, averaging 4 ½ members, so that the average income per family was 19,398 drachmas. But the annual expenditure considered to be indispensable for such a family amounts to 25,055 drachmas, including 16,113 drachmas for food. The average annual deficit is, therefore, 5,657 drachmas for each rural family. It follows that the farmers are compelled to incur debts to provide for their subsistence.

In face of this situation, the Government was obliged to take relief measures.

(1) Agricultural and Co-operative Bank of Bulgaria. Report on the Year 1935. Sofia, 1936.

(2) C. EVELPIDI: Le revenu agricole et sa répartition. Report presented to the 23rd Session of the International Institute of Statistics. Athens, 1936. — Do.: L'agriculture en Grèce. Athens, "Flammarion," 1934.

A special moratorium for agricultural debts had already been introduced in 1930 by a law dated 4 January (No. 4,455); under this law, the presiding judge of the court is authorised to grant to farmers a suspension for 5 years of the repayment of their debts, and to fix the annual charges to be paid. Law No. 5,533 of 1932 renewed these provisions. Debts to the Agricultural Bank were not included in the moratorium.

In 1933 a law dated 24 October (No. 5,876) set up throughout the country commissions for registering the debts of farmers, so as to enable the Government to take the necessary steps for their adjustment.

Apart from the above measures of a general character, certain special measures have been taken to lighten the peasants' debts. These are as follows:

(a) Article 463 of Law No. 5,466 of 1932 declared exempt from distraint an area of 2 hectares of arable land, or half a hectare of vineyard or one fifth of a hectare of land suitable for tobacco growing; this provision applies to all lands distributed under the Law on agrarian reform.

(b) According to Law No. 5,193 of 1933, the annual charges not paid by the farmers who benefited by the agrarian reform will be payable in 25 years. The rate of these charges, as well as that of ordinary annual charges was reduced from 8 per cent. to 6 per cent.

(c) Law No. 6,442 of 1933 reduced by 40 per cent. the debts to the Government of refugee peasants installed in Greece, while the rate of interest on such debts was lowered from 8 to 3 per cent.

Speaking generally, it must be noted that the Agricultural Bank has brought about an appreciable improvement in the matter of agricultural credit. It granted loans in 1934 to the total amount of 1,884,252,446 drachmas. During the four years 1930 to 1934 the loans granted amounted to 6,933,270,286 drachmas.

Hungary.

The Central Statistics Office of the Kingdom of Hungary made known in November 1932 (1) the results of an enquiry into the mortgage charges on landed properties, from which we reproduce some figures.

The gross charges—that is, without taking into account the amortisation payments made—at the end of the year, and the increase during the year of these charges, for each year from 1925 to 1931, were as follows:

Year	Total at the end of the year Pengös	Increase during the year Pengös
1925	109,900,000	—
1926	348,400,000	238,500,000
1927	677,900,000	329,500,000
1928	1,034,500,000	356,600,000
1929	1,567,000,000	532,500,000
1930	1,844,600,000	277,600,000
1931	2,038,000,000	193,400,000

(1) DE KONKOLY THEGE, Dr. JULES: Les charges hypothécaires des propriétés foncières de Hongry à la fin de 1931. *Revue Hongroise de Statistique*, No. 11, November 1932. Office central de statistique du Royaume de Hongrie. Budapest.

The net charges at the end of each year from 1928 to 1931 were as follows:

Year	Total net charges Pengös
1928	950,400,000
1929	1,393,500,000
1930	1,570,400,000
1931	1,716,500,000

The aggravation of the situation of agriculture appears particularly from the numerous inscriptions of executory mortgage rights, which rose from 13,900,000 pengös in 1929 to 19,700,000 pengös in 1930 and to 27,900,000 pengös in 1931, of inscriptions for arrears of taxes, increased from 14,000,000 pengös in 1929 to 21,200,000 pengös in 1930 and to 27,600,000 pengös in 1931 and inscriptions for expenses of foreclosure and of court expenses increased from 2,100,000 pengös in 1929 to 3,100,000 pengös in 1930 and 3,700,000 pengös in 1931.

According to another enquiry relating to the loans granted by credit institutions (banks and savings banks, the central co-operative credit society and other co-operative credit societies), the amount of such loans, at the end of 1931, was 1,363,000,000 pengös, affecting 577,000 owners and 5,900,000 cadastral arpents (1); 45.2 per cent. of the landowners had obtained loans from these institutions and 37.3 per cent. of the total area of the properties was burdened by such loans. Half of the very small landowners and nearly half of the large landowners were debtors to the credit institutions in question. From the point of view of area, the very small and medium-sized properties are particularly burdened with debts of this kind. The greater part of the loans granted by the credit institutions consists of loans on the security of bills (631,200,000 pengös, or 46.3 per cent.) and of long-term loans repayable by instalments (623,200,000 pengös, or 45.7 per cent.). The largest proportion of the loans (418,400,000 pengös or 30.7 per cent.) are a charge upon very small properties; next in order come the medium-sized properties (258,100,000 pengös, or 18.9 per cent.), the small properties of 11 to 50 cadastral arpents (256,800,000 pengös, or 18.8 per cent.), and, lastly, the large properties (pengös 249,800,000, or 18.3 per cent.).

The properties which, in 1931, had mortgage debts equivalent to more than 40 times the net cadastral revenue, had 576,000,000 pengös of charges (58.2 per cent. of the total charges), of which the loans from credit institutions represented 370,000,000 pengös, or 34.9 per cent. of all the loans. The situation had, therefore, grown appreciably worse, especially among the small landowners occupying less than 50 cadastral arpents, which were burdened by the greater part (72.6 per cent.) of the increase of charges.

Information is available only in regard to a part of the agricultural charges other than mortgage charges. This part is estimated at 379,000,000 pengös,

(1) 1 cadastral arpent = 0.57546 hectares = 1.422.012 acres.

including debts for small sums which are calculated as being between 50,000,000 and 60,000,000 pengös.

Thus the total charges, mortgage and other, on Hungarian properties may be estimated, at the end of 1931, at between 2,100,000,000 and 2,200,000,000 pengös.

Towards the middle of 1932, the total debts affecting landed properties were estimated at about 2,300,000,000 pengös. The annual interest on the registered debts at the end of 1932 was 141,000,000 pengös.

Comparing this indebtedness with the value of the land, we arrive at the following result: in 1930, the value of the live and dead stock amounted to 5,500,000,000 pengös, but in 1934 it was only 3,500,000,000 pengös. The value of the land amounted to 6,500,000,000 pengös; the total assets of 10,000,000,000 pengös were, therefore, burdened by debts amounting to 2,300,000,000 pengös.

The situation appears even worse if we consider the rates of interest in relation to the return on the properties. The capital is usually lent at an interest of 8 per cent. It results that on the average each cadastral arpent burdened with debts must support an average annual charge of about 361 pengös; this charge is 740 pengös for small properties and 244 for large properties.

The lands burdened with debts have a total area of 5,271,000 cadastral arpents, that is, nearly 30 per cent. of the total area of cultivated lands. The average value of the lands is 400 pengös per cadastral arpent.

For the indebted properties the interest charges per cadastral arpent (not including the amortisation of capital) amount, therefore, to about 29 pengös, which corresponds, at the prices of 1933, to the value of nearly 3 quintals of wheat. Now the net return of the lands did not give even the value of a quintal of wheat, owing to the fact that the public charges on the farmers are constant and that the prices of industrial goods and of agricultural requisites were proportionately higher than the normal prices of wheat.

A special measure of relief seemed to be indispensable. Especially in regard to small properties, indebtedness was a question of social interest. It was necessary to adopt on their behalf special measures and to allow moratoria. The problems to be solved were those of bringing together the debtor and the creditor, of arresting the artificial devaluation of the land and of laying the basis of a definite solution.

The first measure taken by the Government to deal with agricultural indebtedness was contained in Decree No. 4,300 of 1930, M. E., which empowered a special committee to provide for the appropriate utilisation of the balance of the so-called "Matches Loan," applying it particularly to the adjustment of financial transactions relating to the subdivision of land and to the purchase of agricultural properties when sold by auction. This body was replaced by the National Committee for the Adjustment of Agricultural Debts, established by Law VIII of 1931; the declarations of debts which are addressed to it are inscribed in tabular registers, and the properties to which the entries refer cannot be sold by auction during the three months following the date of the declaration. For these properties sale by auction was afterwards suspend-

ed up to 31 October 1932 (Government Decree No. 5,970 of 1931, M. E.). After this date the owners benefited by the suspension of the sales by auction in virtue of more general measures regarding the adjustment of agricultural debts. Government Decrees issued in 1932 (No. 6,300, M. E. and No. 3,800, M. E.) gave facilities for the repayment of debts on the condition that the debtors had endeavoured to make adequate repayments as far as it was possible for them to do so.

Decree No. 4,300 of 1933, M. E., granted in addition a contribution of the State towards the payment of the interest on debts burdening certain classes of agricultural property.

Another Decree, No. 14,000, of 23 October 1933, M. E. (1) established a situation of temporary truce, during which the indebted rural landowners were protected against distraint and sale by auction on condition that they were in a position to make the payments prescribed by the Decree. This period of truce was to last during the years 1934 and 1935. The first provision of this decree was the general reduction of the rate of interest on agricultural debts. The maximum rate of interest recoverable by legal procedure is 5 ½ per cent. (2).

Special treatment in regard to indebtedness was provided for agricultural properties the owners of which applied for and obtained the special régime set up by the decree in favour of protected properties.

The owner of an agricultural property whose income is in a large proportion derived from this property or from remuneration for agricultural labour and, further, the owner or occupier in usufruct of a parcel of land with a dwelling-house, may request that their properties should be declared judicially to be "protected" properties and inscribed on the land register. To obtain this declaration, it is necessary that the mortgage charge on the property in question should exceed fifteen times the net cadastral income. As long as the property is entered in the land register as a protected property, no new mortgage on similar terms can be inscribed as a charge on the property. Moreover the agricultural debtor who has a protected property will pay a reduced interest on his debts (4 per cent.) and an amortisation instalment of 1 per cent. (3).

The Decree lays down special measures for the adjustment of agricultural liabilities according as the property is larger or smaller than 10 cadastral arpents; the owners of lands that are less than 10 arpents in area and are burdened with debts will have the right to a reduction of the capital sum due.

Protected properties enjoying special facilities represent a heavy burden for the creditors and for the community, and this made it also necessary to

(1) *ANNUAIRE INTERNATIONAL DE LÉGISLATION AGRICOLE*, 1933, p. 831.

(2) The period of truce was prolonged by Government Decree No. 10,000 of 1935, M. E., up to the end of October 1937. This same decree fixed at 5 per cent., as from 1 September 1935, the maximum of the general rate of interest on agricultural debts.

(3) The rate of interest was lowered to 3 ½ per cent. and the amortisation payment to ½ per cent. by Governmental Decree No. 10,000 of 1935, M. E.

safeguard the interests of the State and of the creditor; this was effected by a system of double control, which will be exercised by the Government through the medium of local committees.

Further, as such considerable facilities are very onerous for the credit institutions, provision was made for giving compensation for losses suffered by the fact of the reduction of interest. For this purpose, the Government set up a fund called the Contribution to Interest Fund, the purpose of which is to repay in part to the credit institutions their losses of interest. It also set up an Amortisation Fund, out of which the State will make the payment of the 25,000,000 pengös necessary for the reduction of the debts of owners of farms less than 10 arpents in area.

To meet these extraordinary contributions, an agreement was concluded with the Bank of Hungary whereby the Bank should place a credit of 100,000,000 pengös at the disposal of the State.

As to the results obtained by the application of the Decrees mentioned above, it must be noted that out of about 1,500,000 rural properties in Hungary, more than 90,000 have been declared to be protected; these include nearly 2,000 of which the area exceeds 100 cadastral arpents.

The Government has also allowed amortisation over a period of five years of arrears of taxes in favour of agricultural landowners, as well as of all debtors, under certain conditions. For the protected properties, the amortisation of the arrears of taxes can be effected over a period of ten years.

But, like every measure of the nature of a moratorium, the protection afforded to debtors has become an obstacle to a further grant of credit; this is why it was necessary, by various Orders (No. 2,600 of 1934, M. E., No. 1,950 of 1935, M. E., and No. 1,300 of 1936, M. E.) to exclude from the protection of debtors what is called "green credit", or production credit.

The provision of Government Decree No. 14,000 of 1933, M. E., were supplemented by those of Government Decree No. 10,000 of 1935, M. E., already mentioned. This latter decree lays down that as far as protected properties exceeding 1,000 cadastral arpents are concerned efforts must be made in each case to arrive at voluntary agreements; as to protected properties less than 1,000 cadastral arpents in area it is laid down that the State shall take upon itself the part of the debts in excess of 40 times the net cadastral income; lastly, as regards protected properties the extent of which does not exceed 10 cadastral arpents, it is provided, in addition to the facilities indicated, that the part of the debts below 40 times the net cadastral income shall be repaid by instalments spread over 50 years.

It must be remarked that the situation, from the point of view of agricultural indebtedness, has somewhat improved, owing partly to the rise in the prices of agricultural products that has recently occurred, and partly to the intervention of the Government on behalf of indebted landowners, which we have outlined above.

In consequence of the reduction of the rates of interest, the interest charges on indebted properties fell from 140,100,000 pengös in 1931 to 106,200,000 pengös in 1932.

Poland.

The period of crisis was marked in this country by a fall in prices which affected first cereals, afterwards the other products of arable farming, and lastly live stock and the products of animal husbandry. It was more pronounced for agricultural products than for industrial products. There resulted a fall in the profitability of the farms, involving a contraction of the purchasing power of the rural population, and a depreciation of the value of land.

As Polish agriculture was already heavily indebted before the crisis, the burden of debts weighed more and more heavily on the farms.

According to calculations made by the Ministry of Finance, the indebtedness of the farms on 1 October 1932 amounted to about 4,621,000,000 zlotys, distributed as follows amongst the different classes of debts:

Organised long-term credit	1,842,800,000 zlotys
Private long-term credit	700,000,000 "
Organised short-term credit.	924,800,000 "
Private short-term credit.	800,000,000 "
Arrears of taxation	354,000,000 "
Total	<u>4,621,600,000 zlotys</u>

The short-term indebtedness of agriculture was close upon 1,800,000,000 zlotys, and the annual interest on the whole of the debt was 414,000,000 zlotys, while according to preliminary calculations made by the same Ministry, the cash receipts of the farms cannot have exceeded 2,200,000,000 zlotys for the year 1933-34. The financial position of the farms was, therefore, extremely precarious and directly threatened the structure of the national credit.

The question of indebtedness occupies a prominent place in the action taken by the Polish Government, and it was the subject of a series of laws issued on 24 March 1933, which were afterwards amended and completed as the agricultural situation changed.

The basis of the system of measures taken to adjust the indebtedness of the farms was laid down in 1932. Later, the Government issued, on 24 March 1933 and 28 October 1934 two series of Decrees which deal with the whole problem. The Decree-Laws issued on 30 September 1935 aim at solving certain problems in regard to which Decree-Laws had been issued in previous years. We here confine ourselves to describing the state of the problem as it was after the Decree-Laws of 30 September 1935 were issued.

In these Decree-Laws, the indebtedness of the farms was divided into five principal classes as follows:

1. Arrears due to the treasury and to other public bodies;
2. Long-term indebtedness to agricultural credit institutions;
3. Long-term indebtedness to private individuals;
4. Short-term indebtedness to credit institutions;
5. Short-term indebtedness to private individuals.

As regards the first group of agricultural debts, the measures date back to 1932 and provide for a reduction of arrears due to the treasury, on condition of the punctual payment of current taxes as well as of a part of the arrears due on 1 July 1932 within a prescribed period. They deal also with the rate of interest on arrears.

The conversion of long-term agricultural debts due to agricultural credit institutions was carried out in 1932. The payment of these debts in 55 years was provided for, the rate of interest was reduced to 4 ½ per cent. and a period of three years was allowed during which no repayment of capital need take place.

For long-term debts due to private individuals a period of exemption from the repayment of capital was allowed and the interest was reduced to a rate not exceeding 6 per cent. per annum. The postponement of payment is now in force up to 1 January 1938 and affects the repayment of capital, while the payment of interest is compulsory.

The conversion of short-term debts was organised in different ways (1) according to the type of creditor. In the case of credit institutions and for their benefit, the Acceptance Bank was founded. Established by the Law of 24 March 1933, amended in October 1934 and December 1935, this Bank was called upon to determine the kind of financial aid that should be afforded by the Government to credit institutions that would make arrangements offering to the farmers who were indebted to them facilities for payment. Under the terms of this law the State must:

1. Pay to the credit institutions the difference between the special rate of interest paid by the farmers in accordance with the conversion agreement and the actual expenses of the credit institution in connection with the credit given;

2. Cover 50 per cent. of the losses suffered by the credit institution in respect of the credits for the conversion of which agreements had been made.

The capital of the Acceptance Bank amounts to 20,000,000 zlotys. The State guarantees 30 per cent. of the engagements of the Acceptance Bank, while limiting this guarantee to a maximum of 120,000,000 zlotys. Unlike other banks, the Acceptance Bank is authorised to assume engagements up to a maximum of 20 times of its capital. It follows that its engagements may amount to 400,000,000 zlotys.

The conversion of short-term debts to private individuals was, on the other hand, entrusted to special arbitration offices.

For short-term debts, the Decree-Law of 28 October 1934 laid down a classification of farms into three classes: Class A, including farms of not more than 50 hectares; Class B, including farms of not more than 500 hectares; Class C, farms of more than 500 hectares.

(1) See: "L'endettement des agriculteurs et les mesures aptes à faciliter le remboursement des dettes agricoles en Pologne." Communication by the State Agrarian Bank (Warsaw) to the 5th International Conference of Agricultural Credit, Vienna, 9 to 11 September 1936.

As regards short-term debts due to banking institutions, the Decree-Law of 28 October 1934 makes it compulsory to convert such debts affecting farms of Class A or Class B if they do not exceed 75 per cent. of the value of the farm, as well as making it possible to convert debts affecting farms of Class C, if they do not exceed 50 per cent. of the value of the farm in the case of farms of 500 to 1,000 hectares, or 40 per cent. in the case of farms of 1,000 to 2,000 hectares, or 50 per cent. in the case of farms of over 2,000 hectares. The compulsory conversions must take place before the end of 1935. Converted debts will be repayable over a period of 14 years for Classes A and B and of 10 years for Class C. The rates of interest were fixed at 4 ½ per cent. for Classes A and B and at 7 ½ per cent. for Class C. The amortisation payment during the first three years after the conversion is fixed at 2 per cent., 3 per cent. and 5 per cent. for Classes A and B and at 5 per cent., 5 per cent. and 10 per cent. for Class C. It must be noted that the maximum legal rate is 12 per cent. per annum. The conversion affects only debts that were not contracted before 1 July 1932.

Out of about 930,000,000 zlotys of short-term debts to banking institutions, debts amounting to 234,409,793.31 zlotys had been converted by 2 October 1935. It must be added that the debts of this class benefited by a postponement of repayment up to 1 January 1936, which was conferred by the arbitration offices mentioned above.

For short-term debts due to individuals, dating prior to 1 July 1932, the Decree-Law provides for compulsory conversion, that is, these debts must be paid in 14 years, and an exceptional rate of interest of 3 per cent. is fixed for farms of Classes A and B. Debts of this class on farms of Class C can only be converted by a decree of the arbitration office, which has the right to distribute the repayment over a period not exceeding 14 years and of reducing the rate of interest to 3 per cent. Out of about 1,500,000,000 zlotys of debts of this class, debts amounting to 149,181,619.71 zlotys had been converted up to 30 June 1935.

Lastly, a Decree dated 28 October 1934 provided for the reduction of the debts arising out of the agrarian reform. In particular, it laid down that the debts to the State of the buyers of farms, arising out of this reform, must not exceed 350 zlotys per hectare.

For farms of Classes A and B of which the total debts exceed 75 per cent. of their value and the farms of Class C of which the debts exceed 30 to 50 per cent., according to the size of the farm of their value, the Decree-Law of 28 October 1934 renders it possible to make an arrangement between debtor and creditor. The right to apply for such an arrangement is conferred on the debtor and the creditor, as well as on the treasury. This measure was taken to protect debtors against the ruin of the farm on one hand and, on the other hand, to protect certain classes of creditors, notably in cases where it would be possible for certain creditors to secure for themselves total repayment or a disproportionate repayment of their claims at the expense of other classes of creditors.

The measures taken with a view to improving the financial position of the farms by an adjustment of the problem of agricultural debts laid down by the two series of Decree-Laws of 1933 and 1934 strengthened the provisional and incomplete measures decreed or voted in 1932, at the time of the formation of the general plan for relieving the financial distress of the farms. Certain modifications introduced by decree-laws dated 30 September 1935 only amended some formal or secondary provisions without affecting the system as a whole, which remains intact up to the present time.

It must be noted that after some years of serious difficulties for Polish agriculture, the year 1935, particularly in the second half, showed signs of a certain improvement. The arrest of the fall in agricultural incomes was brought about by a rise, momentarily very pronounced, in the prices of animal products. Although the prices of cereals hardly showed any tendency to rise, the general index of the prices of articles sold by the farmers rose during the course of 1935 from 35.6 to 38.2 (1928 = 100). As the index of the prices of articles purchased by farmers fell at the same time from 68.2 to 65.3, the purchasing power of the farmers slightly increased, and this is evidenced by the increased purchases of agricultural machines and implements, as well as of certain other industrial products.

In the matter of interest payments, agriculture obtained fresh facilities in 1935, consisting in the adjournment for three years of the repayment of debts other than those contracted with banks, and in further possibilities of converting debts through the medium of the Acceptance Bank and of the arbitration offices above mentioned (1).

Romania.

Amongst the facts which, in recent years, have weakened the financial position of the Romanian farmer must be reckoned the agrarian reform and the economic crisis. In pursuance of the agrarian reform, more than 6,000,000 hectares, or about 30 per cent. of the cultivable area of the country, were transferred from the large landowners to the peasants; but the new small owners were devoid of capital, of technical instruction and of the modern means of production necessary for putting the lands to full use. The result was a low yield per hectare and production of inferior quality, obtained, moreover, at too high a cost. The fall in prices on the world market, when it occurred, made the gross return per unit of area fall from 6,670 lei in 1929 to 3,416 lei in 1932, and this latter sum was insufficient to cover the cost of production. On the other hand, the prohibitions of importation, the quotas, the restrictions in regard to the milling of cereals, the difficulties in the transfer of foreign currencies, etc., caused Romania to lose several outlets for its agricultural products which, before the crisis, represented about 50 per cent. of the total exports. The consequence was a heavy indebt-

(1) Bank of National Economy, Warsaw. Report for the year 1935. Warsaw, 1936.

edness of the farms, which, according to official statistics (1) amounted in 1932 to 52,348,000,000 lei, thus distributed:

1. Debts of agricultural landowners possessing more than 10 hectares, 14,971,000,000 lei;

2. Debts of agricultural landowners possessing less than 10 hectares, 37,377,000,000 lei.

Details of this indebtedness are given in the following tables.

Debts of Agricultural Landowners possessing more than 10 hectares and having applied to take advantage of the Law on the Adjustment of Agricultural Debts.

Groups of debtors	Number of agricultural debtors	%	Area of the properties in hectares	%	Amount of the debts in millions of lei	%	Average per hectare
Up to 500,000 lei	12,572	74.66	493,694	55.61	2,536	16.94	5.136
From 500,000 to 1,000,000 . .	1,747	10.37	89,479	10.08	1,668	14.14	18,641
From 1,000,000 to 5,000,000 .	1,996	11.85	199,600	22.49	4,692	31.34	23,507
From 5,000,000 to 10,000,000 .	332	1.97	66,400	7.48	2,278	15.22	34,307
More than 10,000,000 lei . . .	192	1.15	38,400	4.33	3,797	25.36	98,880
Total	16,839	100	887,573	100	14,971	100	16,867

Debts of Landowners possessing less than 10 hectares.

Territory	Number of agricultural landowners	%	Area of the properties in thousands of hectares	%	Number of agricultural debtors	%	Area of the indebted properties in thousands of hectares	%
Former Kingdom	1,944,279	61.65	4,982	63.97	1,209,182	38.35	2,806	36.03
Bessarabia	608,674	62.83	2,208	62.44	360,071	37.17	1,328	27.56
Transylvania	1,111,754	59.49	2,252	60.93	756,928	40.51	1,464	39.07
Bukovina	198,976	57.26	250	71.88	148,500	42.74	98	28.12
Total	3,863,683	60.86	9,692	63.07	2,474,781	39.14	5,696	36.93

Territory	Number of the creditors	Debts, in millions of lei, of the agricultural landowners to:						Total of the debts in millions of lei	%
		Popular banks	%	Other credit institutions	%	Private individuals	%		
Former Kingdom	749,349	6,214.7	35.38	7,112.3	40.49	4,239.2	24.13	17,566.2	47.00
Bessarabia	169,041	732.6	28.88	952.9	37.56	851.4	33.66	2,536.9	6.79
Transylvania	1,239,094	1,879.6	12.36	7,912.3	52.03	5,414.6	36.61	15,206.6	40.68
Bukovina	176,588	234.4	11.34	580.4	28.08	1,252.4	60.58	2,067.1	5.53
Total	2,334,072	9,061.3	24.24	16,557.9	44.30	11,757.6	31.46	37,376.8	100

(1) CONVERSIUNEA DATORILOR AGRICOLE. Ministry of Justice. Service of Judicial Statistics. Bucarest, 1932.

In recent years successive Governments have devoted special attention to the relief of indebtedness and four laws were voted on the subject, dated 19 April 1932, 26 October 1932, 14 April 1933 and 7 April 1934. The Liberal Government (November 1933), which introduced the last of these laws, aiming at a definite solution of the problem, appropriately embodied it in a general programme of agricultural adjustment. It held the view that the mere reduction of credits would not ensure their payment in the future and that what was required was a policy for the organisation of production at a cost that would leave a margin of profit, so that the producer might derive an income from it. Amongst the points of the programme that are closely related to the relief of indebtedness may be mentioned:

(a) The establishment of modern agricultural centres, furnished with modern technical equipment for every branch of production, with a view to increasing the yield of the land and improving its quality;

(b) The regulation of foreign commerce in order to extend the outlets for Romanian agricultural products and to assure their sale;

(c) Granting aid to debtors for the liquidation of their debts: for this purpose the State lowered to 2 per cent. the rate of interest on the credit of 800,000,000 lei that it had advanced to the Agricultural Mortgage Credit Bank out of the Development Loan of 1931; the Agricultural Mortgage Credit Bank, in its turn, lowered the rate of interest on its long-term loans from 7 to 5 per cent;

(d) The action taken to increase the price of cereals in order to provide an assured income to the debtors, so that they might pay the instalments of their debts (reduced as we shall presently see) when they became due;

(e) The reduction of fiscal charges, etc.

As will be seen, the problem with which we are here dealing, has thus been faced in all its amplitude.

The principles on which the Law of 7 April 1934 (1) on the liquidation of agricultural and urban debts is based are the following (2):

1. To place the debtor in such a position that the voluntary fulfilment of his obligations becomes possible, avoiding the necessity of foreclosure and without having recourse to the spreading of payments over too long periods, which is burdensome to the creditors;

2. To assure the rapid and automatic application of the law, so that its effects may not be paralysed by discussions and that normal relations between creditors and debtors may be quickly restored;

3. To avoid, in giving effect to the conditions of payment, possible frauds by the parties, without, however, preventing anticipated repayments;

(1) "Textes législatifs," published by the International Institute of Agriculture. 1934 Series, No. 10.

(2) VOICULESCO JEAN-TH.: *Essais critiques sur la loi roumaine de liquidation des dettes agricoles et urbaines du 7 avril 1934*. Paris, Loviton, 1935. See also the memorandum of the President of the Council of Ministers (Tataresco) on the occasion of the presentation to the Chamber of the Bill on the liquidation of agricultural and urban debts.

4. To assure, as far as possible, equitable distribution amongst the creditors of the losses resulting from the law, and to provide financial means for maintaining credit.

The Law adopts the principle of respecting the expressed or tacit will of the creditors, but it acts automatically, in the sense that if the creditor makes no opposition, he is considered as having accepted the law, at any rate tacitly, and, therefore, as being subject to its application; if, on the other hand, he does not wish to accept it, he must make a declaration to that effect. In this latter case, the creditor will no longer be subject to the reduction of his claims, but he must allow to the debtor a moratorium of ten years, which may be prolonged for a further five years, at a rate of interest of 1 per cent. on the initial capital only. The creditor further exposes himself, in this case, to the expropriation of his claims, in conformity with the Law on expropriations for public utility.

The same Law provides for a reduction of the creditors' claims by 50 per cent.; the remainder is payable by half-yearly instalments over a period of 17 years, with interest at 3 per cent.; this makes 34 instalments, due on 15 May and 15 November in each year. To make things easier at the beginning for the debtor, the first two instalments will be of 2 ½ per cent. and the two following of 3 per cent. of the reduced claim. The other 30 instalments will be equal parts of the balance remaining to be repaid.

In order to encourage the debtor to pay his reduced debt more quickly, the law gives him three kinds of supplementary advantages. Thus, debtors who pay the reduced debt within two years from the date of the publication of the law, will benefit by a reduction of 70 per cent., on condition that they pay, in the course of the first year, at least 15 per cent. of the total amount of the debt, interest included. In like manner, the debtors who pay a debt within the first five years, will benefit by a reduction of 60 per cent., on condition that they pay at least 8 per cent., plus the interest on this portion, of the total amount.

The third advantage consists in a supplementary reduction of 6 per cent. per annum on instalments paid in advance, calculated from the date of payment to the date on which the instalment in question becomes due.

Agricultural debtors who do not possess sufficient resources to pay off their debts, have found it advantageous to obtain the necessary funds from the Agricultural Mortgage Credit Bank, thus securing the maximum reduction allowed by the law. The mortgage loans granted by this institution up to 31 December 1935 numbered 842 and amounted to 811,332,500 lei. These were distributed over the four years 1932 to 1935 as follows:

	Number of loans	Total amount lei
1932.	66	80,275,000
1933.	81	65,435,000
1934.	153	139,607,500
1935.	542	525,955,000

Of the total amount above indicated of loans granted, 26,119,473 lei had been repaid by the same date; the capital remaining due was thus 785,213,027 lei.

The legislation on the reduction of agricultural debts and the extension of the period of repayment had a favourable effect on the economic condition of the peasants. It is estimated that 70 per cent. of the debtors at present benefit by the advantages conferred by the law (1). The farmers, relieved of a large percentage of their debts, have made, fairly punctually, the first payments required by the conversion.

The definite solution of the problem of indebtedness has brought about a revival of economic activity amongst the Romanian farmers, which has been encouraged by other factors (2).

Czechoslovakia.

The indebtedness of agriculture in the Czechoslovak Republic on 1 January 1935 was estimated at about 19,256,000,000 Czechoslovak crowns. This figure was determined by the Institute of Rural Accountancy and Rural Economy (3) as the result of an enquiry carried out on 3,044 agricultural properties distributed over the whole territory of the State. It appears from the statistics obtained that it was the properties of not more than 2 hectares and the properties over 100 hectares in area that were the most heavily indebted. The average indebtedness per hectare of the properties not more than 2 hectares in area amounted to 4,137 crowns in the Western part of the country and to 3,192 crowns in the Eastern part; the properties exceeding 100 hectares in area were indebted to the extent of 2,632 crowns in the Western part of the country and of 2,411 crowns in the Eastern part.

In the farms less than 2 hectares in area, the interest and amortisation payments on the debts is usually covered by the income from an accessory activity, such as a trade; now, owing to the failure of this source of revenue since the beginning of the general economic crisis, the condition of these farms has become very painful. On the other hand, the medium-sized properties, varying in area from 5 to 20 hectares, which occupy the half of all the farming area, are the least indebted per unit of area, their average indebtedness being 2,225 crowns in the Western provinces and 1,235 crowns in the Eastern provinces.

The indebtedness of the other size-groups per hectare is as follows:

Properties from 2 to 5 hectares in area:	
In the Western provinces	3,316 crowns
In the Eastern provinces	1,889 "
Properties from 20 to 100 hectares in area:	
In the Western provinces	2,540 "
In the Eastern provinces	1,699 "

(1) TATARESCO G., Président du Conseil des ministres: Deux années de gouvernement. Discours prononcé au Parlement le 14 décembre 1935. Bucarest, 1935.

(2) See the "Report of the Managing Board of the National Bank of Romania to the ordinary general meeting of shareholders, held on 22 March 1936."

(3) "Indebtedness of Farmers in Czechoslovakia." In the *Reports of the Institute of Rural Accountancy and Rural Economy of the Czechoslovak Republic*, 6th Year, No. 2-3, 1935. Prague.

Of the total debts, 9,095,000,000 crowns are in respect of Bohemia, 4,358,000,000 crowns in respect of Moravia-Silesia, 5,003,000,000 crowns in respect of Slovakia and 800,000,000 crowns in respect of Sub-Carpathian Russia.

Besides the total amount of agricultural indebtedness or the average indebtedness per hectare, the distribution of indebtedness, as shown by the percentage ratio between the indebted farms and the total number of farms is very significant. In the Western provinces, out of 1,080,689 farms, 19.8 per cent. (213,976) are free from debts, whilst 22.6 per cent. (244,236) have debts amounting to not more than 1,000 crowns per hectare and 7.2 per cent. (77,809) have debts amounting to over 8,000 crowns per hectare. In the Eastern provinces, out of 567,915 farms, 14.5 per cent. (82,348) are free from debts, whilst 39.8 per cent. (226,030) have debts amounting to not more than 1,000 crowns per hectare and 2.4 per cent. (13,630) have debts amounting to over 8,000 crowns per hectare.

From the figures of average indebtedness per hectare, amounting on 1 January 1935 to 2,765 crowns in Bohemia, to 2,492 crowns in Moravia-Silesia, to 1,729 crowns in Slovakia, and to 1,395 crowns in Sub-Carpathian Russia, it appears that this indebtedness becomes lower as one passes from West to East; this is a consequence of the more primitive forms of farming in the Eastern parts of the country.

The causes of indebtedness must be sought in the decrease of the agricultural return resulting from the economic crisis (the disparity due to the fact that the farmer bought more dearly than he sold in comparison with the prewar period, became more and more marked from 1927 onwards, reaching 63 per cent. in 1932, after which it decreased, falling to 34 per cent. in 1935); in the very heavy interest charges; in the investments in farm buildings or dwelling-houses; in the expenditure for the purchase of machines and for improvements which was incurred at the time when market conditions were favourable, but must be amortised in time of crisis, or else in investments made on credit; in debts occasioned by the payment of shares at the time of taking possession of the properties or at the time of the payment of the dowry, of the supply or completion of the live or dead stock; in the more costly mode of living and, lastly, in the increasing amount of the taxes on taking possession and of the social charges. The provinces furthest from urban centres show a lower indebtedness, probably owing to a more modest standard of living.

It was inevitable that the economic crisis which has so seriously affected agriculture, particularly in recent years, should have given rise to numerous legislative measures of relief in Czechoslovakia. These measures were at first provisional in character and were confined to protecting the farmer against serious loss or against the complete ruin which might have overtaken him as a result of the distraint of his property. Amongst these measures may be mentioned the Law of 5 May 1933, No. 74 of the "Collection of Laws and Decrees," by which distraint on the property of farmers was provisionally regulated, and the Government Decree of 29 June 1933, No. 155, containing provisional measures regarding the bankruptcy of agricultural properties. These legislative measures, valid in the first instance up to the end of 1933, were extended and afterwards replaced by the Law of 24 February 1934, No. 33, the validity of which was

extended, after certain amendments, up to the end of 1935 by the Government Decree of 22 December 1934, No. 259. Besides these measures of protection applied to the whole territory of the Republic, other measures were introduced after the disastrous effects of the bad weather in 1934 on behalf of the farmers of the districts most seriously affected by the scanty harvest (Governmental Decree of 13 July 1934, No. 142, amended and completed by the Governmental Decrees of 27 September 1934, No. 207, of 6 October 1934, No. 211, and of 22 December 1934, No. 258). By these provisions the principal functions relating to distraint on the property of farmers and to the declaration of the bankruptcy of their properties were regulated. In the districts most severely injured by a bad harvest the protection was extended even to legal proceedings for the recovery of debts.

But apart from the measures mentioned above, which could not completely solve the problem of indebtedness, mention must also be made of those more directly intended to protect certain products (flax, hops, timber, etc.) and of the Government Decree of 13 July 1934, No. 137, on the regulation of the trade in cereals, flour, milling products and certain kinds of fodder. By this Decree, the farmers received the guarantee, on the one hand, that they would be able to sell the cereals and, on the other hand, that they would obtain fixed prices for them on which they could count. As a result of this provision, speculation in the commodity exchanges was prevented as far as the grain trade is concerned.

In like manner, all the measures capable of insuring an equitable return to the farmer's labour were applied also in relating to animal husbandry.

When the agricultural return reached a certain level, the measures mentioned above by which a moratorium was applied to agriculture were successively abolished, for they involved inconvenient disadvantages, weakening agricultural credit and inducing certain persons not to fulfil their engagements, even if they were in a position to do so. For these reasons, the measures above mentioned were not further extended beyond 31 December 1935, and, instead of this, the adjustment of agricultural debts was carried out in an organic manner.

Provision was made, on the one hand, for a reduction of the rates of interest by the Government Decree of 21 December 1935, No. 238, which fixed the maximum rates allowed, and, on the other hand, for the granting of facilities for the payment of agricultural debts by the Government Decree of 21 December 1935, No. 250.

The debts are divided into two groups, in which the annuity charges are distributed over longer periods. In the case of a long-term debt, the debtor is called upon to pay, as from 1 January 1936, an annuity charge of $\frac{3}{4}$ per cent. of the original principal, plus the interest (reduced to the extent fixed by Government Decree No. 238 of 1935) on the same capital sum. In the group of other agricultural debts (including even mortgage debts payable within a period of 10 years), the payment of the debt is spread over 8 years or, in the districts most seriously injured, over 9 years from 1 October 1936.

Further, the Government Decree of 31 March 1936, No. 76, regulated agricultural adjustment with the object of preventing the ruin of large numbers of farmers by forced sales. This was effected by provisionally introducing certain

exceptions to the general regulations for adjustment laid down by the Law of 27 March 1931, No. 64, which did not fully meet the needs of the farmers. The decree in question extended from 30 September 1936 to 31 January 1937 the limit of date allowed for the presentation of applications for the opening of proceedings for agricultural adjustment. These proceedings are intended definitely to relieve the debtors, at any rate partially, from their most burdensome debts, in order to place them in a position to retain their properties.

Yugoslavia.

During the last ten years, agriculture has passed through various stages, from the agrarian reform to the present crisis, which has adversely affected the peasant class, reducing its purchasing to such an extent as could not fail to have very serious effects on the whole economic life of the country.

At the beginning, Government action aimed at improving the general conditions of production by organising, amongst other things, agricultural credit (Law of 16 April 1929) in order to enable the peasants to obtain the necessary means for farming their lands.

In order to maintain prices an Office for Foreign Trade was set up at the Ministry of Commerce and Industry (Law of 19 November 1929) and the Privileged Company for the Export of Products was formed with a capital of 30,000,000 dinars (Law of 15 April 1930).

But these and other measures did not succeed in arresting the fall in prices and the impoverishment of the rural population, nor did they prevent the sale of the heavily indebted peasant properties.

According to an enquiry carried out by the Ministry of Agriculture, the debts of the peasants amounted in 1932 to about 7,000,000,000 dinars. They had been contracted during the phase of inflation and of high prices, often at excessive rates of interest; hence the difficulty of repayment.

At that time there were in Yugoslavia more than 700,000 indebted peasants, whose total debts amounted to 6,982,000,000 dinars, distributed as follows:

To private creditors	3,154,000,000 dinars or 45.2 per cent.
To credit institutions	2,246,000,000 dinars or 32.2 per cent.
To agricultural cooperative societies.	875,000,000 dinars or 12.5 per cent.
To the Privileged Agricultural Bank (1) }	707,000,000 dinars or 10.1 per cent.
To the Mortgage Bank	

According to a recent enquiry the number of indebted farms appears to be about 800,000, that is, about 40 per cent. of all the farms in the country. The most up-to-date farms are the most heavily indebted.

The Law of 19 April 1932 (2) imposed a moratorium for six months, which was extended on 19 December of the same year until the coming into force of

(1) In the Balance Sheet on 31 December 1935 of the Bank the borrowers of the different classes appear as owing 736,355,355 dinars, of which 467,430,259 dinars were in respect of mortgage loans.

(2) See ANNUAIRE INTERNATIONAL DE LÉGISLATION AGRICOLE, 1932, p. 1,150.

a new law regarding the protection of farmers as well as the improvement of credit relations in the country. The situation, however, steadily grew worse, for in consequence of the moratorium the peasant class finished by losing the possibility of obtaining credit, whilst, on the other hand, the general economic conditions of the country became more and more disquieting.

A Decree-Law dated 3 August 1934 (1) prescribed that debts contracted by peasants before 20 April 1932 should be repaid in 12 annual instalments, according to a progressive scale, the first instalment, calculated on the basis of a rate of interest of 6 per cent., becoming due on 15 November 1934.

But the measures outlined above only postponed the payments. A Decree-Law of 8 October 1935 endeavoured to provide a final solution of the question, without, however, completely succeeding.

The next measure was the Decree-Law of 25 September 1936, which applied to all persons—individually or forming a family community (2)—whose taxable income is derived mainly from agriculture and who possess a property containing not more than 50 hectares of arable land in the first case and 100 hectares of arable land in the second case. And as previously this limit had been higher, certain facilities were also granted to large landowners in respect of that part of their debts burdening 50 hectares of their farms, and to the family communities for the part of their debts burdening 100 hectares.

In this law, by debts are understood all financial engagements between 251 dinars and 500,000 dinars incurred under private law before 20 April 1932. *Engagements for the payment of wages, debts for subsistence (or food), taxes, engagements arising out of succession to property and debts to poor creditors, recognised as such by a court, are excluded from regulation.*

The relations between debtors and private creditors are regulated by very elastic provisions, allowing of individual treatment in each case.

Debts arising out of the purchase of goods and out of the service of artisans must be completely repaid, but without interest, by instalments spread over 12 years, starting from 15 November 1936.

Debts arising out of other legal transactions are reduced by 50 per cent.; the remainder must be repaid by instalments spread over 12 years, with interest at 3 per cent. The debtors and the creditors can apply to the courts for a declaration that the reduction of 50 per cent. is not sufficient (which is specially to be presumed in the event that before 20 April 1932 usurious interest had been paid) or that it is not justified.

It is the Privileged Agricultural Bank that takes over the debts contracted with private banks and co-operative credit societies. Such debts, when not exceeding 25,000 dinars, are reduced by 50 per cent. While those of a higher amount are reduced by a smaller percentage, which ordinarily does not exceed

(1) See ANNUAIRE INTERNATIONAL DE LÉGISLATION AGRICOLE, 1934, p. 733.

(2) In order that there may be such a community, the Decree requires that there shall be at least three male persons living and working in common, whilst formerly it was required that there should be more than five male persons over the age of 15 years.

30 per cent. The sum remaining must be repaid directly by the farmers to the Privileged Agricultural Bank, with interest at $4\frac{1}{2}$ per cent., in 12 annual instalments, starting from 1 November 1936. The transfer of the indebtedness to the Privileged Agricultural Bank is made in the following way: the banks and co-operative credit societies reduce by one quarter the ordinary amount of the debts, making good the reduction out of their reserves and the half of their capital, while the second quarter is covered by State bonds at 3 per cent. interest, which must be amortised in 20 years, and the remainder, that is, 50 per cent., is credited to them, on current account, at the Privileged Agricultural Bank. The State guarantees the amortisation of this account with 3 per cent. interest in a period of 14 years, starting from 31 December 1937.

Instead of this current account, the private banks and the co-operative credit societies can have consigned to them "orders for the payment of the debts of peasants to the Privileged Agricultural Bank;" these orders can be offered in pledge at their nominal value to the National Bank and utilised by the peasants for the amortisation of their debts.

A special method of adjustment is provided for direct debts to the National Bank, to the Privileged Agricultural Bank and to the State Mortgage Bank, as well as for the debts of the "agrarian subjects," that is, of those who have acquired lands under the agrarian reform, in so far as concerns debts contracted to the seller of the land in order to pay him the price of it.

D. — BALTIC STATES.

Estonia.

The first measures taken in Estonia with a view to improving the situation of the indebted farmers having proved to be ineffective and, on the other hand, the possibilities of State assistance being limited, it became necessary to make preliminary enquiries regarding the amount and the nature of farm indebtedness. With this object, an enquiry was made amongst the farmers by order of the Government, to which about 30 per cent. of the farmers replied. From the information collected, it appeared that the total indebtedness of agriculture was 115,400,000 Estonian crowns on 1 August 1932. Of this sum, 63,700,000 crowns were owed to the State; 25,500,000 crowns to co-heirs and to private individuals; 20,500,000 crowns to private banks; 3,300,000 crowns to private firms; 2,400,000 crowns to the State and to autonomous administrations for arrears of taxes. It was found also that out of the total number of farms about 55 per cent. were indebted, and that the debts represented on the average 20.5 per cent. of the value of the debtors' capital. The debts averaged 768 crowns for holdings up to 10 hectares in area; 1,253 crowns for holdings of between 10 and 20 hectares; 1,748 crowns for holdings of between 20 and 30 hectares; 2,067 crowns for holdings of between 30 and 50 hectares, and 3,473 crowns for holdings over 50 hectares in area.

The general indebtedness of agriculture having been thus determined, the rate of interest on loans granted by the Land Bank was reduced to $2\frac{1}{2}$ per cent.

by a law voted for this purpose on 10 November 1932. It was held to be necessary, moreover, to convert into long-term loans the loans privately made to farmers, that is, debts contracted with co-heirs, with private individuals and with private undertakings. For these purposes, Parliament voted a Law on 23 May 1933 (1). Under this Law, private loans were compulsorily converted into long-term loans up to a total amount of 6,000,000 crowns (1) when the farmer in question had farmed his lands in a scientific manner; (2) when the debts had been contracted before 31 December 1932, and (3) when the total amount of the debts was neither less than 20 per cent. below nor 100 per cent. above the land value of the farm as estimated by the Land Bank. These private loans were paid to the creditors, by equal instalments spread over 10 years, out of the capital of the Colonisation Fund, while, on their part, the farmers were expected to repay their loans to the Land Bank in the course of 30 years; during the first years the repayment of their debts was specially encouraged. To relieve still further the indebtedness of agriculture, the Law above mentioned was amended and voted in its new form on 31 August 1934. In conformity with this Law, agricultural debts were converted into long-term loans of the Land Bank up to a total amount of 10,000,000 Estonian crowns, with the exception of debts of more than 100 per cent. of the land value, which were converted into loans for a term of 30 years without interest. In this way, private loans were converted into long-term loans to an aggregate amount of 2,500,000 crowns.

It must here be noted that a considerable improvement has taken place in the economic conditions since 1933, in which year Estonia had been seriously affected by the general economic crisis (2).

Latvia.

In view of the reconstruction of the farms destroyed by the war as well as of the formation of about 70,000 new farms, the Latvian farmers were obliged to have recourse to credit of various kinds. At the time when prices were high, the farmers borrowed money freely because their receipts were large. But after the fall in the prices of agricultural products and in consequence of the contraction of the resources of the farmers, a great many farmers found difficulty in making payments. In order that the peasants might not be ruined by the sale by auction of their property, various measures were taken by the Government with a view to relieving their condition (3). In the first place, some civil laws were amended with a view to preventing, for a certain length of time, sale by auction for the repayment of farmers' debts. Certain small loans that the State had granted to them for private needs were, as we shall see presently, completely cancelled. The various short-term loans obtained by the farmers

(1) See *ANNUAIRE INTERNATIONAL DE LÉGISLATION AGRICOLE*, 1933, p. 815.

(2) See the Report 1926 to 1936 of the State Agricultural Bank of Estonia (*Eesti Maapank*). Tallinn, 1936.

(3) See the Reports of the State Land Bank of Latvia for the years 1934 and 1935.

from co-operative credit societies or from private banks were transferred to the State Land Bank and converted into long-term loans.

The interest on the loans granted to the farmers by the State was also reduced. The maximum rate of interest authorised by a Law of 1933 for the loans is fixed at 8 per cent. and it is applied by the private credit institutes that also finance agriculture. The debts converted by the State Land Bank are subject, on the contrary, to interest at 4 per cent.; the regular half-yearly payments, including those for the amortisation of the capital, which is to be carried out in 28 years, amount to $3\frac{1}{4}$ per cent. On most of the loans granted directly by the State Land Bank interest at 2 per cent. per annum is payable, but for a small proportion of them the interest is 3 per cent.

The effects of the conversion of the farmers' debts appear from the following table in which a comparison is made between the total agricultural debts in 1932 (prior to the conversion) and the total in 1936 (1):

	Lats	1932 %	Lats	1936 %
Long-term loans:				
State Land Bank	200,100,000	59.9	210,400,000	67.9
Short-term credit institutions . .	67,300,000	20.1	60,600,000	19.5
Other debts	66,800,000	20.0	39,000,000	12.6
	<hr/>	<hr/>	<hr/>	<hr/>
Total . . .	334,200,000	100.0	310,000,000	100.0
	<hr/>	<hr/>	<hr/>	<hr/>

The total of the agricultural debts has decreased since 1932 by 46,700,000 lats. But this is not a consequence of the conversion, the Latvian Law on conversion not providing for any reduction of the principal. In 1932 the debts of the peasants averaged 84.83 lats per hectare of land, and in 1935 they only averaged 73.34 lats.

The change in the structure of the indebtedness is worth pointing out. The long-term debts have relatively increased, while unorganised short-term credit has lost almost a third of its importance.

The Law of 1934 on the relief of certain agricultural debts provided for the partial cancellation of the loans granted by the State Land Bank up to 1932 and devoted to the construction of rural buildings, to the improvement of the soil, to the purchase of live stock, to the acquisition of land or to the regulation of successions. The amount to be cancelled must not exceed 300 lats per farm. The loans granted for the installation of co-operative dairies could be cancelled up to a total amount of 2,000,000 lats in the case of two or three amalgamated societies which would have suspended the production of the respective creameries or reduced it to that of a single separating station.

(1) LA CRISE FINANCIÈRE DE L'AGRICULTURE. (Étude de l'accumulation des dettes agricoles et de leur revision, plus particulièrement en Lettonie). Banque foncière de Lettonie. Riga, 1936.

The amount of the loans completely or partly cancelled amounted, at the end of 1935, to 38,400,000 lats, that is, 15 per cent. of the total of the loans granted.

In 1933, 57 per cent. of the borrowers made all the payments that became due, in 1934, 58 per cent., and in 1935, 60 per cent.

These figures seem to indicate an improvement in the solvency of the debtors, which is mainly due to the adjustment of the economic conditions of agriculture resulting from the Government economic policy and from the conversion of the debts.

Lithuania.

Up to 1932 the world crisis was hardly felt in Lithuania. Economic difficulties only began to manifest themselves in 1933. At the end of 1935 the long-term mortgage loans of the Agricultural Bank (*Zėmės Bankas*) numbered 26,634; they affected 576,000 hectares of mortgaged land and amounted to 105,753,000 litas. The average indebtedness per hectare of land mortgaged was thus 183 litas. At the same date, the short-term loans of the co-operative credit societies amounted to 38,000,000 litas.

The measures adopted by the Government for the relief of debts may be summarised as follows.

A reduction has been made in the rate of interest on mortgage loans, which was 6 $\frac{1}{2}$ to 7 per cent. at the end of 1932. It was reduced to 6 per cent. in 1933, to 5 per cent. in 1934 and to 4 per cent. as from 1 July 1936.

Provision has been made, also, for the conversion of short-term mortgage loans into long-term mortgage loans and for the liberation of the farmers from debts contracted with private individuals who, when the economic situation became difficult, demanded the repayment of their money. On 1 February 1934, a Law was promulgated allowing farmers to repay their private debts by means of bonds of the Agricultural Bank, bearing interest at the rate of 3.6 per cent., at their nominal value. The same Law gave the farmers the right to apply to the local court for the suspension of forced sales by auction for periods varying from 4 to 18 months, but only in cases in which the total debts of the applicant did not exceed 75 per cent. of the value of his agricultural property. Having obtained this suspension the farmer can arrive at an agreement with his creditors by making use of bonds of the Agricultural Bank bearing interest at 3.6 per cent. He may procure these bonds from the Bank in the form of long-term loans or he may buy them on the open market. In 1934 and 1935, that is, during the most acute period of the crisis, these bonds were quoted at 70 to 75. Thus, buying them at this quotation, the farmers reduced their original debt by 25 to 30 per cent. Latterly the situation has become less favourable, for the market price of the bonds has risen to 80; this does not, however, prevent the repayment of debts to private individuals from continuing to be made in quite normal conditions.

(to be continued)

G. COSTANZO

RETURNS OBTAINED ON ACCOUNT-KEEPING FARMS IN THE STATE OF MICHIGAN IN 1933, 1934 AND 1935

SUMMARY: Examination of accountancy data. Values of results obtained. Factors causing variation in farm earnings. Returns in 1933. Returns in 1934. Returns in 1935.

In 1933, complete financial records were submitted by 891 farmers to the Farm Management Department of Michigan State College for closure and analysis. The keeping of the individual records was under supervision with the object of ensuring that all inventory values should be comparable and all transactions properly entered. The Department subsequently effected the classification, shown here in the table of accountancy results, for 795 out of the 891 farm records submitted. In 1934, the number of these records analysed reached 845 and in 1935 it was 933.

In its report, the Farm Management Department states that it considers as the best measure of financial success for Michigan farms the operator's labour and management wage. It adds however that this latter value does not include the value of farm products used for the consumption of the farm household; hence it cannot be compared with the family labour earnings of the farms of other countries. An attempt was made to obtain a precise return from each co-operator of the quantity and value of the products used by the family, but it was not completely successful. Furthermore, in some areas, the number of farms under survey is not large enough to be representative of the entire area. The different areas do not retain, in respect of earnings, their same relative position from one year to another. One year an area may show a maximum earning, and the following year one much lower. But in general it may be said that over a long period the earnings in different areas of a state tend to be practically equal, provided there is no change in land values and no shifting of population.

On examining the individual farm records for 1933, it is clear that some farms had a distinct advantage over others. These differences in many cases were due less to the work done than to the quality of the work. Among the factors affecting the income from American farms are: volume of business, balance of business, efficiency and rate of production. To keep these in view is to be able, in existing economic conditions, to increase net earnings, whether by doing a volume of business at least 25 to 50 per cent. larger than the average, or by better organisation of the business, or by adopting efficient methods of crop production and stock farming.

A certain volume of business is essential on a farm to meet the irreducible overhead expenses: taxes, interest, insurances, depreciations, upkeep of buildings and machinery, and the labour of the operator. An increased volume may be obtained by more intensive crop and livestock production and by securing new markets and trade outlets. A well organised farm business is one that utilises to best advantage the available land, buildings, equipment, power, labour and markets. Efficient production methods are essential to satisfactory yields per acre and to production per head of stock. On a well organised farm, production costs can be reduced and net gains increased.

The above is given practically in the words of the Department, as being most fully acquainted with the agricultural conditions of the State of Michigan. The following study of the accountancy results is also based on the remarks contained in the published reports.

1. — *The Returns in 1933.*

The proportion of farms the operators of which secured a reasonable return for their labour and management in 1933 was 65 per cent.; the remaining 35 per cent. did not secure an income sufficient to cover a 5 per cent. interest charge on their investment. The proportion of deficiatary farms in 1932 was 86 per cent., 84 per cent. in 1931, 63 per cent. in 1930 and 25 per cent. in 1929.

An examination is here made of the farms of the first six groups in which the operator's labour and management wage was seen to increase in 1934 and again to decline in 1935.

On the maize and live stock farms and on those combining dairying with poultry (groups 1 and 2), the operator's labour and management wage was negative in 1933; no increases in inventory were made; expenditure (especially on forage) was above average.

The labour and management wage, or operator's earnings, on farms that are mainly fruit farms, on the dairy farms growing beans and hay, on farms combining general activities with orchard cultivation (groups 3, 4 and 5) was below average. The first of these secured a high gross return but to do so had to incur unduly high expenses; in the case of group 4 the farming expenses were also too high in comparison with the gross return: the expenditure of the farms in group 5 was less than in the other groups, but the gross return remained below average.

The farms of Chippewa Co. maintained a more harmonious balance between expenditure and gross return.

The stock farms growing potatoes (group 7) were in an even more favourable position in respect of this balance; the inventory increases were very considerable. These increases were due to the rise in prices of potatoes and other crop products. Of the receipts 55 per cent. were derived from the stock farming. Potato crops were much better in the region where the farms of this group are situated than in other regions. and prices were very satisfactory.

Groups 8, 9, 10, 11, 12, 13 and 14, it will be seen, have shown yearly increases in operators' earnings. Special note may be taken of the general farms (group 12) and of those combining dairying with the growing of beans and beetroot (group 14) which are the most numerous.

Farms of group 12 in 1933 derived 69.1 per cent. of receipts from stock farming, of which milk forms the most important product, with breeding of pigs, sheep and poultry in addition. The dairying industry is favoured by the vicinity of markets such as Lansing, Flint, Detroit, Jackson, Grand Rapids and Battle Creek. There is a large sale of fluid milk on these markets. The increases of inventory on these farms in 1933 were mainly due to the increase in forage prices and in prices of other field products.

On the farms of group 14 attention is given as much to cultivation of beans and beetroot as to the stock farming. At the same time breeding and dairy-

TABLE I. — Gross Return, Farming Expenses, Net Return in Dollars per Farm, in the State of Michigan.

TYPE OF FARMING		Number of farms	Average area in acres	Gross				return			Farming expenses										Total (10 to 15)	Net return (7 - 16)
				Cattle breeding	Dairy produce	Pigs	Other animals	Crop sales	Other branches (1)	Total (2)	Hired labour	Family labour	Total labour (8+9)	Fertilisers	Feeds	Taxes	Other expenses	Depreci- ations				
																			1	2			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
I		II	III	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
General averages.	1933	795	154	111	614	99	209	536	284	1,853	126	558	684	117	160	102	255	115	1,433	420		
	1934	845	157	185	740	132	297	682	430	2,466	156	560	716	142	255	90	348	158	1,709	757		
	1935	933	164	207	840	188	345	699	624	2,903	198	598	796	174	249	79	469	178	1,945	958		
1. Maize and live stock	1933	45	164	97	695	329	381	250	10	1,762	125	619	744	97	232	143	200	140	1,625	137		
	1934	53	189	560	808	421	527	562	450	3,328	220	592	812	175	478	131	416	21	2,222	1,106		
	1935	66	187	268	852	587	516	743	1,489	4,458	323	629	952	219	487	106	606	666	2,569	1,889		
2. Dairying and poultry	1933	29	110	93	810	83	489	183	39	1,697	128	571	699	94	316	96	244	112	1,561	130		
	1934	32	110	120	944	62	691	255	612	2,684	139	584	723	133	43	76	253	137	1,755	921		
	1935	32	176	110	1,116	74	828	323	261	2,712	181	583	764	125	503	66	352	167	1,977	733		
3. Fruit farming	1933	57	96	56	350	33	111	1,550	158	2,258	285	567	852	280	143	96	336	102	1,800	4,499		
	1934	65	98	84	424	36	157	2,034	598	3,333	348	593	911	325	200	87	508	152	2,183	1,509		
	1935	64	103	152	475	53	153	1,940	480	3,253	422	626	1,048	371	213	81	631	152	2,409	1,757		
4. Dairying, beans and hay.	1933	19	156	205	774	22	171	538	175	1,885	81	684	765	134	108	124	245	126	1,502	383		
	1934	16	162	323	1,154	42	278	558	1,009	3,304	106	679	785	177	182	116	303	127	1,750	1,614		
	1935	28	153	461	1,014	57	280	696	243	2,751	104	691	795	177	139	84	561	125	1,881	870		
5. General with fruit farming	1933	67	115	120	639	51	190	349	170	1,519	89	498	587	77	208	76	218	73	1,239	280		
	1934	64	119	151	674	66	260	441	313	1,905	97	593	600	86	211	67	241	95	1,300	605		
	1935	71	115	207	688	105	317	489	257	2,063	142	579	721	117	221	57	333	90	1,539	524		
6. Chippewa Co. farms.	1933	17	224	189	795	34	328	657	169	2,172	121	537	658	114	294	96	313	121	1,596	576		
	1934	15	219	135	836	49	303	659	482	2,524	111	597	678	99	235	87	304	100	1,563	961		
	1935	16	247	291	1,450	80	512	330	131	2,794	205	574	779	128	203	71	532	134	1,847	947		
7. Potatoes and cattle	1933	113	201	116	544	44	121	467	627	1,919	117	502	619	91	114	67	224	104	1,219	700		
	1934	126	194	121	598	51	150	628	16	1,564	127	485	612	86	105	50	323	131	1,373	191		
	1935	144	192	207	687	91	160	463	386	1,994	163	526	689	117	139	54	327	117	1,434	500		
8. Cattle, sheep and forage.	1933	34	160	111	377	43	171	202	261	1,160	56	477	533	64	91	64	153	102	1,007	162		
	1934	35	157	153	392	58	205	273	320	1,307	51	478	529	60	123	55	158	92	1,017	380		
	1935	32	180	190	524	89	285	216	335	1,639	73	475	548	75	74	55	255	98	1,165	534		
9. Cereal and live stock	1933	55	182	86	743	223	199	449	186	1,886	167	586	753	101	157	148	245	143	1,547	339		
	1934	67	180	173	833	284	202	706	676	2,874	200	606	806	151	239	127	462	213	1,998	876		
	1935	80	179	165	797	366	275	765	870	3,238	212	622	834	180	276	111	533	304	2,238	1,000		
10. Dairying	1933	22	120	121	985	97	272	328	196	1,099	108	621	729	131	229	140	267	109	1,605	394		
	1934	32	142	122	1,497	79	303	435	593	3,029	197	649	846	187	398	142	417	262	2,252	777		
	1935	26	153	229	1,818	108	340	645	610	3,750	279	682	961	217	384	133	570	174	2,439	1,311		
11. Mixed farming with fruit growing	1933	41	148	84	381	35	126	380	344	1,350	78	484	562	83	99	56	166	86	1,052	298		
	1934	35	135	138	506	71	144	478	110	1,447	108	468	576	96	129	50	208	155	1,214	233		
	1935	43	142	186	536	90	190	515	264	1,781	138	501	639	102	142	45	289	80	1,297	484		
12. General farming	1933	140	161	135	658	134	297	458	258	1,940	119	585	704	115	162	126	265	129	1,501	439		
	1934	158	172	244	776	195	498	565	492	2,770	149	586	735	140	361	104	341	160	1,841	929		
	1935	176	184	216	956	249	533	596	955	3,505	198	635	833	195	352	89	529	210	2,208	1,297		
13. Dairying and potatoes.	1933	18	154	114	843	67	37	448	391	1,900	114	596	710	98	94	87	253	133	1,375	525		
	1934	22	156	182	1,419	72	80	450	526	2,735	159	608	767	126	230	130	360	175	1,788	947		
	1935	22	175	179	1,573	61	143	586	887	3,429	235	650	885	175	178	122	622	207	2,189	1,240		
14. Beans, beets and dairying	1933	97	130	111	537	133	181	744	312	2,018	106	576	682	129	97	116	276	121	1,421	597		
	1934	88	139	154	673	154	243	901	687	2,812	142	590	732	160	147	95	378	193	1,705	1,107		
	1935	92	138	229	777	242	396	1,134	400	3,178	170	634	804	183	143	82	503	256	1,973	1,205		

(1) Including inventory increases.

(2) Not including contributions in kind to the household.

TABLE II. — *Operator's Labour Earnings, in Dollars per Farm, in the State of Michigan.*

TYPE OF FARMING I		Number of farms II	Average acreage III	Net farm income (1)	Interest on own capital	Operator's labour and manage- ment wage
				1	2	3 (1-2)
General averages.	1933	795	154	840	591	249
	1934	845	157	1,175	610	565
	1935	933	164	1,390	626	764
1. Maize and live stock . .	1933	45	164	597	643	— 46
	1934	53	189	1,533	759	774
	1935	66	187	2,333	767	1,566
2. Dairying and poultry . .	1933	29	110	572	580	— 8
	1936	32	110	1,377	561	816
	1935	32	176	1,195	551	644
3. Fruit farming	1933	57	96	872	719	153
	1934	65	98	1,569	692	877
	1935	64	103	1,224	737	487
4. Dairying beans and hay .	1933	19	156	845	688	157
	1934	16	162	2,073	718	1,355
	1935	28	153	1,334	647	687
5. General with fruit farming.	1933	67	115	646	459	187
	1934	64	119	969	458	511
	1935	71	115	953	447	506
6. Chippewa Co. farms. . .	1933	17	224	929	583	346
	1934	15	219	1,315	548	767
	1935	16	247	1,294	661	633
7. Potatoes and cattle . . .	1933	113	201	1,061	447	614
	1934	126	194	548	436	112
	1935	144	192	929	412	517
8. Cattle, sheep and forage.	1933	34	160	508	410	98
	1934	35	157	729	402	327
	1935	32	180	890	426	464
9. Cereal and live stock . .	1933	55	182	812	682	130
	1934	67	180	1,344	709	635
	1935	80	179	1,468	717	751
10. Dairying	1933	22	120	870	683	187
	1934	32	142	1,257	802	455
	1935	26	153	1,789	861	928
11. Mixed farming with fruit growing	1933	41	148	647	354	293
	1934	35	135	583	359	224
	1935	43	142	834	363	471
12. General farming.	1933	140	161	913	674	239
	1934	158	172	1,398	713	685
	1935	176	184	1,769	762	1,007
13. Dairying and potatoes .	1933	18	154	1,005	642	363
	1934	22	156	1,409	690	719
	1935	22	175	1,706	777	929
14. Beans, beets and dairying.	1933	97	130	1,049	693	356
	1934	88	139	1,555	737	818
	1935	92	138	1,674	762	912

(1) Only the fair wage claim of the operator is here shown.

ing are not neglected, milk production being favoured by the proximity of the markets of Saginaw, Bay City, Flint and Detroit. The cropping development is due to the fact that there are in this region large tracts of fertile soil and mild seasonal conditions. In 1933 there was a rise in the prices of cereals and of other field products.

2. — *Returns in 1934.*

In 1934, the net return, the farm income and the operator's earnings increased: the gross return was larger all along the line. Although it was a year of drought, the rise in prices and the benefit payments made to the farmers under the Agricultural Adjustment Administration were factors causing higher receipts.

Farming expenses and cost of production also increased: but not in the same proportion as the gross return.

The index-numbers of prices paid to farmers rose from 100 in 1910-14 to 165 in 1929; in 1932 they fell to 69, advancing to 93 in 1934. The price-indices of farm requisites rose from 100 in 1910-14 to 153 in 1929: in 1932 they had fallen to 107, but advanced to 123 in 1934.

The profits made by farmers varied in 1934 considerably from one region to another; to a great extent, the differences were due to variations in weather conditions and in the prices of agricultural products. The drought was not everywhere equally severe. The abundance of the potato harvest occasioned a considerable fall in the prices of the crop. Profits were especially low in the areas where potato growing predominates, as on farms of group 7.

The gross return of the stock farms growing maize (group 1) substantially increased in 1934, mainly in consequence of the advance in prices. Growers who had been obliged to reduce as far as possible the expenses of the previous years, and even in many cases to neglect equipment, could now afford higher farming expenses.

Higher prices of forage and seeds were considerable factors in the increase of farming expenses on the farms engaged in dairying and poultry-keeping (group 2).

The rise in prices of forage, dairy and poultry products has markedly contributed to the increase in gross return.

The advance in prices of cereals, hay, pigs, butter, chickens and eggs had a certain share in the striking leap upwards of the gross return on the farms devoted to fruit cultivation (group 3). All expenses, except taxes, were on the increase.

The inventory increases and the dairying returns of the dairy farms growing beans and hay (group 4) stood in 1934 at a much higher level than in 1933. There was considerable expenditure on replacement of equipment.

On the general farming enterprises engaged also in orchard cultivation (group 5), labour and fertilisers were dearer in 1934. Expenditure on upkeep of buildings and dead stock, neglected in the preceding years when returns had been low, was larger than in 1933. The gross return considerably increased.

The farms of Chippewa Co. (group 6) show tendencies similar to those of the farms of group 5.

Next come a group of farms (group 7) which in 1934 gave much less satisfactory financial results than in the previous year. The financial success of these

farms largely depends on the potato harvests and on the sales of the product. In 1933 the potato harvest was scanty throughout the United States and prices accordingly rose. In 1934 on the other hand the abundant crop caused a decline in prices.

Operator's income on the forage crop farms carrying cattle and sheep (group 8) is larger in 1934 than during any of the four preceding years, but it remained below the level reached in 1929. The comparison of these two extreme years shows that the gross return has fallen more sharply than the farming expenses.

The poor cereal harvest on the farms combining cereal cultivation with stock farming (group 9) was more than counterbalanced by the rise in prices. Growers were thus enabled, in spite of higher labour costs, increased expenditure on purchases of forage and fertilisers as well as upkeep expenses, to secure higher profits than in 1933.

The dairy farms (group 10) show the same tendencies as those of group 9, *viz.* increase in labour costs, in expenditure for fertilisers and forage, for repairs, higher interest charges; more marked increase in the gross return, especially in the return from the principal branch.

The expenses of the mixed farms which grow fruit (group 11) have also increased. An inventory loss is to be noted here, the reason being the fall in the prices of potatoes, to which is for the most part due the cutting down of growers' profits.

On the contrary, a marked inventory increase is to be noted on the farms engaged in general farming (group 12). Expenditure for purchases of forage, and all the usual expenses of farms of this group are those which show the most marked advance: prices of forage were higher, and on the other hand farmers were obliged by the short crops to purchase larger quantities of feeds for their animals.

The advance in forage prices and prices of dairy and poultry products, the less important place taken by potato growing, all these contributed to the obtaining by the dairy farms cultivating potatoes (group 13) of a higher gross return and operator's earnings.

In the region occupied by the dairy farms growing beans and beets (group 14), the effects of drought were less felt than elsewhere; and the financial success is evidence of this.

3. — *Returns in 1935.*

In spite of unfavourable weather conditions, crop production reached a higher level in the State of Michigan in 1935, being 20 per cent. more than the average of the last ten years. Prices of all crop products, except potatoes, fell. Prices of live stock and animal products rose. From the point of view of financial prosperity the year 1935 was the best for Michigan farmers since 1929.

Index-numbers of the prices of agricultural products advanced from 93 in 1934 to 113 in 1935; those of prices of farm requisites from 123 in 1934 to 125 in 1935. Taxes were lower in 1935 than in 1934. In consequence of the more marked rise of prices of agricultural products, the gross return increased proportionately more than did the farming expenses. Since the live stock prices were those which reached the highest level, the farms of the regions where stock farming

predominates benefited more as compared with the farms of regions where by preference there was production of cereals and milk.

Accordingly a particularly gratifying financial success was that of the stock farms growing maize (group 1) which give a specially important place to fattening of bullocks, lambs and pigs.

The forage crop farms carrying cattle and sheep, the stock farms growing small cereals, the dairy farms and those engaged in general or mixed farming (groups 8, 9, 10, 11, 12 13 and 14), although their profitability was not that of the stock farms growing maize, did more fully than in 1934 repay the efforts of the farmers, as they also benefited by the favourable trend of certain prices and moreover received a considerable part of the benefit payments made by the Government in respect of pig breeding and cereal growing.

The gross return was increased but in a much less degree on the farms combining dairying with poultry keeping, on the general farms with orchard cultivation and on the farms of Chippewa Co. (groups 2, 5 and 6) although inventory decreases were noticeable. The gross return on the other hand diminished on the fruit farms, on the dairy farms growing beans and hay (groups 3 and 4). On group 3 this decrease was due to the lower receipts from sale of fruit, and on group 4 to the very marked inventory decreases, and to the decline in the return from dairy production.

Since labour costs and expenditure on purchases of fertiliser and on upkeep of buildings and machinery were all considerably higher, the farmers of groups 2, 3, 4, 5, and 6 did not realise such large profits as in 1934, these groups gaining less advantage from the price rises in than the groups 1, 8, 9, 10, 11, 12, 13 and 14.

The stock farms growing potatoes (group 7) recovered the equilibrium lost in 1934. The potato crop, which in 1934 had attained a level never before reached, was fairly close to the average in 1935; hence there was a rise of prices and consequently in the return.

Thus, in 1934 and in 1935, the price rises of agricultural products together with the benefit payments received from the Government by the farmers caused a revival of the agriculture of Michigan.

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(2) List of abbreviations: bihebdomadaire (biweekly); bimens. (twice monthly); bimestr. (every two months); déc. (every ten days); étr. (foreign price); f. (copy); hebdomadaire (weekly); int. (home price); irr. (irregular); mens. (monthly); n^o (number); N. S. (new series); p. a. (per annum); q. (daily); sem. (half yearly); s. (series); v. (volume); trim. (quarterly).

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AGRICULTURAL INDEBTEDNESS (*concluded*) (1).

E. — ASIATIC COUNTRIES.

India.

Agricultural indebtedness forms, as is well known, one of the most serious and most urgent problems in India. It has been said of the Indian peasants that most of them are born, live and die indebted and bequeath their debts to their children.

The Indian Central Banking Enquiry Committee estimated the total indebtedness in 1929 in British India alone at 900 crores (2) of rupees, and this figure has since greatly increased owing to the fall in prices which for certain products has amounted to about 50 per cent.

It is calculated that if no repayment of capital took place between 1929 and 1932, the actual volume of debts must at present amount to about 1,800 crores, and, if all the interest were in arrears, to 2,200 crores. The total production of the principal commodities decreased, at the same time, from 1,018 crores in 1928-29 to 536 crores in 1931-32. Thus, while incomes considerably declined, the debt very largely increased.

While the volume of agricultural indebtedness forms a problem in itself, the rate of interest at which most of the debts have been contracted forms a second, and equally thorny, problem. In certain districts in the Bombay Presidency, 12 per cent. is the ordinary rate of interest and the village money-lenders charge from 18 to 24 per cent., but in Bihar and Orissa, Sind and Assam, the rate varies between 25 and 50 per cent. and even in the United Provinces it runs from 18 to 37 per cent. It is true that the landowners in most of the provinces can obtain loans on first mortgage at between 9 and 12 per cent. interest, but the small-landowners must often pay higher rates and, as happens in the case of tenant-farmers and labourers who cannot offer adequate security, the rates applied may sometimes reach between 150 and 300 per cent. The interest on loans of cereals is never less than 25 per cent. and, in certain regions, it amounts to between 50 and 100 per cent.

(1) See the issues of January, February and March of this Bulletin.

(2) 1 crore = 100 lakhs; 1 lakh = 100,000.

The original cause of indebtedness (1) lies in the inadequacy of the receipts, which is due to the extreme smallness of the farms, to the inefficient methods of production and sale, to the frequent failure of the crops and to the mortality of live stock. The agricultural population of India is increasing, but the lands available for cultivation are limited. The proportion of farmers in the total population increased from 61 per cent. in 1891 to 66 per cent. in 1901 and to 73 per cent. in 1921, and the slight decrease of 2 per cent. registered by the Census of 1931 is of doubtful importance. The total cultivated area is 228,800,000 acres. This represents barely an acre per head of the total agricultural population, and about 4 ½ acres, on the average, per farmer's family. In the course of the decade between the Census of 1921 and that of 1931, the sown area only rose from 224,900,000 acres to 228,800,000 acres, an increase of less than 2 per cent., while the population rose from 319,000,000 to about 353,000,000, an increase of more than 10 per cent. On the other hand, the yield per acre, for the important crops, such as rice and wheat, remained practically stationary for 20 years, whilst for other crops, such as cotton, for example, it only increased slightly.

A characteristic of Indian indebtedness is that it results mainly from unproductive expenditure, that is, from expenditure for purposes other than agricultural. Thus in the United Provinces 60 per cent. of the outstanding debts were, according to the Provincial Banking Committee, contracted for such purposes as marriages and other social ceremonies, for the maintenance of the family and for the payment of taxes.

One of the most deplorable results of the indebtedness is the decline of the class of independent peasants. It is estimated that, between 1921 and 1931, the number of farm servants per thousand ordinary farmers rose from 291 to 407, which represents a considerable increase in the landless population.

Another consequence of the debts is the frequent transfer of lands from one holder to another. It is calculated that in the space of thirty years, each parcel of land in a village changes hands at least once (2).

During recent years the problem in question has been specially studied in India by the Royal Commission on Agriculture in India (1928), and, from 1929 onwards, by the Indian Central Banking Enquiry Committee, which made known its results in 1931 (3). Since then the question has been constantly under study, and several measures have been taken or contemplated to relieve the indebtedness.

The Government of India, in April 1934, convened at Delhi a conference of the provincial governments to decide upon a common programme of action

(1) P. I. THOMAS: *The Problem of Rural Indebtedness*. Madras, Diocesan Press, 1934. — Amongst the most recent works on economic and social conditions in India, see also CHOWDRI MUKTAR SINGH: *Rural India (Peasants' Poverty, its Causes and Cure)*. Allahabad, Krishna Ram Mehta.

(2) THOMAS, *op. cit.*, p. 13.

(3) THE INDIAN CENTRAL BANKING ENQUIRY COMMITTEE, 1931. Vol. I, Part I: Majority Report. Part II: Minority Report. Calcutta, Government of India. Central Publication Branch, 1931.

in regard to the difficulties caused by the fall in prices and the decline in the demand for raw materials and, in particular, to study the effects of these facts on the condition of the farmers.

The first question considered by the Conference was that of agricultural indebtedness. The possibility of developing mortgage credit banks was discussed, amongst other matters, as also were the functions of the agricultural credit department of the new Central Reserve Bank that it was proposed to establish in India.

In connection with the Debt Conciliation Bill, presented to the Legislative Council of Madras towards the end of 1934, the Board of Revenue (Land Revenue and Settlement) ordered an enquiry to be made into the problem of agricultural indebtedness in the Presidency (1). This enquiry, which was completed in July 1935, showed for two typical villages of each of the districts of Madras, that between 1931 and 1934, 23,932 acres had changed owners, largely as a result of sales and mortgages. Of this figure, 4,772 acres, or about 20 per cent., were transferred to persons who were not agriculturists. On the basis of this observation, it was calculated that, for the whole Presidency, the area transferred from one owner to another would be approximately 10,351,000 acres, of which 2,070,000 acres were transferred to non-agriculturists. It is estimated that a very large part has passed to large absentee owners, for the most part money-lenders. It results, therefore, that many owners of small and medium-sized holdings had been dispossessed and remained without land and in poverty because of foreclosures for debt.

As regards the rates of interest, for mortgages without possession they ordinarily vary between 9 and 12 per cent., but there are also cases in which the interest varies between 6 and 9 per cent. and others in which it amounts to more than 12 per cent., rising to 18 and even to 24 per cent. Interest lower than 6 per cent. or higher than 24 per cent. is rarely met with. It must be noted that we are here speaking of ordinary rates of interest. There are much higher rates of interest, but these have so to speak a penal character and are due to the fact that the borrowers rarely repay their debts at the due date.

As to the amount and distribution of agricultural indebtedness, the enquiry studied 141 selected villages in the Presidency. From the data thus collected referring to the year 1935, it appears that the total number of indebted persons was 74,892, including 48,358 landowners, 16,039 tenant-farmers, and 20,620 agricultural labourers and that the aggregate indebtedness amounted to 1,78,85,666 rupees. The indebtedness per head of the population may be calculated at 38 rupees, and the indebtedness per cultivated acre at 63 rupees. On the basis of these figures, it has been calculated that the total agricultural debt in 1935 for the whole Presidency was about 200 crores of rupees.

In 1932 the Government of the United Provinces—as had been done in 1930 in the Province of Bihar and Orissa—instructed a committee to study

(1) SATHYANATHAN, W. R. S., I. C. S.: Report on Agricultural Indebtedness. Madras, Government Press, 1935.

the problem of agricultural debts and to present recommendations. The report of this committee showed that the total unpaid debts had considerably increased and that interest was only being paid to a very small extent. The committee recommended that conciliation committees should be formed to bring about arrangements between creditors and debtors. Subsequently three bills, the Agricultural Relief Bill, the Reduction of Interest Bill, and the Usurious Loans Bill, were submitted to the Legislative Assembly.

The Government of the Central Provinces adopted in 1933 the Debt Conciliation Act, which set up conciliation committees. Under this law, conciliation must be voluntary, but the committees can compel the creditors to draw up and to present detailed accounts of their claims, accompanied by the documents establishing them; the creditors who do not comply with this demand of the commission lose all their rights. Moreover, those of the creditors who accept an arrangement are given, in the carrying out of the judgements they obtain, priority over other creditors. Those who, on the other hand, refuse to agree to any adjustment, cannot, if they bring the case into court, recover the costs of the action, and they can only be awarded interest at the rate of 6 per cent. on the principal, the amount of which will be determined by the court. The Government has, moreover, amended the Usurious Loans Act, the provisions and procedure of which have been revised so as to enable the courts to examine the previous transactions of the money-lenders and to declare excessive and fraudulent any interest exceeding 12 per cent. on secured credits and 18 per cent. on credits not secured. It was ascertained that interest ranging from 15 to 75 per cent. was commonly charged. On the other hand, compound interest will no longer be allowed. Lastly, the Government submitted to the Legislative Assembly a bill, the Money-Lenders' Bill, which lays down the manner in which the money-lenders must keep their books and provides that they must present, every year, a detailed account to their debtors. The law also contains a rule to the effect that the accumulated interest must never exceed the principal, however long the debt may have been owing. In the Punjab, too, the Government has submitted to the Legislative Assembly various bills on the problem of debts.

The plan for agricultural indebtedness applied, from 1930 to 1934, in the Native State of Bhavnagar, has roused much interest in India (1). We will here describe it.

In January 1922, a certain number of *kheduts* (2) complained to the authorities of the desperate economic condition in which they found themselves, attributing this condition to the excessive interest and to the commissions of every kind charged by the local money-lenders (*sowcars*). The sums due by

(1) "The Problem of Peasant Indebtedness in India: The Bhavnagar Plan." *International Labour Review*, Geneva, April 1935.

(2) A *khedut* is a cultivator domiciled in the State who, either single-handed, or with the aid of servants, derives his income, wholly or in part, as a registered tenant or sub-tenant of a holding of which a part at least belongs to the State.

the indebted *kheduts* sometimes reached, according to an official enquiry, 15 to 20 times the amount of their annual income. The *khedut*, even if perfectly solvent, could not obtain loans otherwise than by the system of *savaya*. Under this system, when a peasant borrowed, for example, at the season of sowing or of hoeing, 100 rupees, 25 rupees was added to this sum by way of commission and a note of hand was drawn up for 125 rupees, payable within a period of four to eight months, that is to say, after the harvest. But these terms were granted only to solvent *kheduts*. Others had to undertake to repay the loan at a date agreed upon, not in cash, but in kind, the quantity of products to be delivered (of cotton, for example) being valued below the market price and below the price that could be obtained for it at the time of the harvest.

A form of loan, known as *alak*, consisted in introducing into the agreement a clause according to which, in default of payment of the sum due at the date agreed upon, the borrower bound himself to settle the debt in kind. According to the report of the enquiry in question, the *sowcar* succeeded in certain cases, by means of the *alak*, in obtaining in six months, five or six times the initial amount of the loan.

In the system known as *kadhara*, the equivalent of the seeds lent for sowing must be returned after the harvest with an addition of 50 to 70 per cent.

The plan adopted by the Government of Bhavnagar involves a widespread action for liquidating the debts of the peasants. To assure the success of this action, the Government counted on the voluntary collaboration of the *sowcars* and *kheduts*. It invited the *kheduts* to declare their debts and the *sowcars* to declare their claims. The declarations were carefully checked and an adjustment was made on the following bases:

(a) The sum that had to be paid by an individual debtor must not exceed an amount equivalent to three times the annual dues paid by the debtor to the State;

(b) The total amount of the sums to be paid by a *tappa* (group of neighbouring villages) must not exceed a quarter of the total amount of the unpaid debts of the peasants of this *tappa*.

The plan was financed by the Government, which advanced to each debtor the sums he required to free himself; these advances had to be repaid to the State by successive instalments, by means of an increase of 4 per cent. on the amount of the annual dues. The debtor was, however, allowed to pay off the amount in a single payment or to pay instalments larger than those that had been fixed.

The carrying out of the plan was entrusted to Debt Conciliation Committees nominated by the Government and consisting of representatives of the Departments of Finance and of Justice. These committees began their work in April 1930 and by March 1934 their action had extended over the whole country and all the debts of the *kheduts* had been extinguished. The total debts, of which the nominal amount, according to the books of the money-lenders, was 8,638,874 rupees, were settled by payments totalling 2,059,473 rupees.

The total amount that was really due, according to the Government, was 4,511,183 rupees, which means that more than half of the nominal amount

of these debts was fictitious and that it had only been arrived at by means of irregularities, frauds or excessive usury on the part of the money-lenders.

The *kheduts* will be protected in future against the exactions of the *sow-cars* by the Kheduts Protection Act, which gives the courts the power of examining in detail transactions concluded between the money-lender and the debtor, from the origin of the debt, and to determine the capital really due. The court can also determine the amount of the sums already paid, as well as fix the interest, which must always be simple and not compound interest, at a rate not exceeding 12 per cent. per annum. No contract will be valid, in the eyes of the law, if the rate of interest agreed upon exceeds this maximum.

In other Native States also, much importance has been attached to this question. In the State of Mysore, the government has instructed a commission to draw up plans for the formation of debt conciliation committees, for the regulation of the activity of money-lenders and for the creation of other possibilities of credit. In the State of Cochin, the Government has decided to reduce the debts and to bring down the rates of interest to 6 or to 7 ½ per cent. on secured credits and to 9 per cent. on credits not secured. In the State of Hyderabad, the Government proposes to take steps to relieve indebtedness and to prevent usury. In the State of Revah, measures have been taken to prevent the debtors from being compelled to sell their land for the fulfilment of a pledge.

Japan.

In contrast with the high degree of prosperity attained in recent years by Japanese industry, which has been able to overcome unfavourable economic conditions by a remarkable adaptation of its capacities and its possibilities to the new requirements of world economy, agriculture has remained in the same state of distress in which it has been for some years past, notwithstanding the active policy pursued by the Government with a view to remedying its state of disequilibrium. There exist profound and long-standing causes of this distress. Amongst the main causes must be specially noted the relative insufficiency of the area devoted to agriculture, barely 16 per cent. of the total area being reserved for rice-growing. This means that each farm only disposes, on the average, of about a hectare of cultivable land; in round figures, 71 per cent. of the peasant families have at their disposal less than a hectare of land, and even allowing for the low standard of life in Japan, a hectare does not suffice to produce what is indispensable. Only 25 per cent. of the rural population have sufficient land at their disposal, and barely 3 per cent. cultivate land of an area that allows of a prosperous agricultural economy. The smallness of the cultivated area explains by itself the distress in which the rural classes in Japan find themselves. The smallness of the cultivated area and the poverty of the peasant involve, in their turn, the almost complete absence of modern technical equipment. Further, in the majority of cases the Japanese peasant is not the owner of the land he cultivates. Only 31 per cent. of the peasants are owners of the land they farm; 27 per cent. are tenant-farmers and

42 per cent. are small owners who must rent the greater part of the land they cultivated. The number of tenant-farmers who do not own any land is tending to increase. The fiscal charges burdening agriculture are, moreover, somewhat heavy.

The purchasing power of the rural population had already been greatly reduced by the causes noted and by yet other causes inherent in the intrinsic structure of agriculture, when the world economic crisis occurred to aggravate the situation.

This aggravation was due, in the main, to the fall in the prices of cocoons and of raw silk, to the collapse of the rice market, and to the rise in the prices of agricultural requisites.

To give an example, the average prices per kwan (1) of spring cocoons fell from 7.41 yen in 1929 to 2.52 yen in 1932; in 1933 there was a rally (6.25 yen), but at the beginning of 1934 the situation again became critical; prices fell rapidly to a level more than 50 per cent. below that of the preceding year, thereby causing the ruin of the silkworm-rearers.

The price of raw silk was at its minimum in July 1934, when the very low price of 476 yen per bale (60 kilogrammes) was reached.

It must be added that the index-numbers of the prices of cocoons and of raw silk in 1934 showed a much heavier decline than those of wholesale prices in general and of certain other products, such as rice and cotton yarn. Taking the average prices of 1922 to 1927 as equal to 100, we have the following index-numbers in May 1934: white cocoons, 26.4; raw silk, 26.4; wholesale prices in general, 79.9; cotton yarn, 73.9; rice, 76.5.

As a result, after an improvement in 1932 and in 1933, the aggregate income derived by the farmers from the three principal products of Japan (rice, cocoons, wheat) fell in 1934 by 500,000,000 yen.

The indebtedness of the farmers, accordingly, considerably increased.

According to an enquiry made in 1931 by the Agricultural Association of the Empire (*Teikoku Nōkwai*), the total agricultural indebtedness was estimated on 30 June 1929 at between 4,000,000,000 and 6,000,000,000 yen.

According to a more recent enquiry made by the Ministry of Agriculture and Forests, the indebtedness of the farmers amounted, in July 1932, to 4,717,424,557 yen, the average indebtedness per farm being 837 yen.

The majority of the agricultural debts bear interest at 10 per cent., but there is also a considerable number of debts burdened with interest at 12 per cent., at 15 per cent. and even at more than 15 per cent. On the other hand there is a small number of debts on which the interest is only 7 per cent.

The difficult situation in which the farmers in Japan found themselves, gave rise to several measures on their behalf (2). Amongst others we may note Law No. 21 of 28 March 1933, on the associations for the adjustment of rural

(1) 1 kwan = 3.75 kilogrammes = 8.27 lbs.

(2) See, in Part II of *THE WORLD AGRICULTURAL SITUATION IN 1933-34*, published by the International Institute of Agriculture in 1935, the chapter on Japan, contributed by Dr. G. FERRIS.

indebtedness. It aims at adjusting the indebtedness of persons residing in the agricultural villages, of mountain-dwellers and of fishermen, by the formation amongst them of associations for the adjustment of debts (*jusai seiri kumiai*), based on the spirit of mutual solidarity and neighbourliness and having as their object the carrying out of the adjustment of the debts of their members by plans for amortisation and plans for the economic revival of the village.

The association must in the first instance intervene between the indebted member and his creditors, with a view to bringing them to an agreement involving a reduction of the principal and of the rate of interest, and more favourable terms regarding the period and terms of amortisation.

When the good offices of the association do not lead to an understanding, the association can request the intervention of the communal committee for the adjustment of indebtedness; and if an agreement is not reached, even by these means, the parties are authorised to avail themselves of the special procedure for conciliation in regard to money debts, laid down by the Law of 6 September 1932.

F. — NORTH AMERICA.

Canada.

The serious economic depression of the years 1929-32 (in 1933 signs of revival were noted) placed a great number of farmers in a state of insolvency. During this period the gross agricultural income fell by more than half, decreasing from \$1,631,081,000 to \$766,794,000. This decline in income is attributable to a large extent to the fall in prices. In fact, the index-number of wholesale prices of agricultural products, which was 100.8 in 1929 (1926 = 100) fell to 82.3 in 1930, to 56.3 in 1931 and to 48.4 in 1932, afterwards rising to 65.4 in December 1935.

According to the latest census, 224,201 farms, or 33.33 per cent. of the total number of Canadian farms, were burdened in 1931 by mortgages amounting to \$671,776,500, which then represented 16.75 per cent. of the total value of all farms and 40.86 per cent. of the value of the mortgaged farms. But in addition to mortgage debts there exists a large number of short term debts of which the 1931 census did not take account. These debts are usually incurred in connection with current farming operations. Now it is no exaggeration to say that the total of these short term debts represented in 1931 at least a fourth of the guaranteed debt. It is, therefore, not far from the truth if we say that the 224,201 mortgaged farms were burdened by a total debt of about \$800,000,000. As these figures vary but little from one year to another, it may be estimated that they have remained approximately the same during the whole period of the crisis.

An Act to facilitate compromises and arrangements between farmers and their creditors was assented to on 3 July 1934. It came into force on 1 September in the same year. Under the terms of this law, official receivers were appointed in each judicial district, and a committee for the revision of debts in each pro-

vince. A farmer who, without having become bankrupt, was burdened with debts which it was impossible for him completely to pay, could go to the official receiver of his district, who would help him to draw up a declaration showing the whole of the liabilities and estimating the whole of his assets. The farmer could then make a proposal suggesting either a reduction of his debts or an extension of the period of repayment. The official receiver then undertook to submit this proposal to the creditors. If they accepted it, the arrangement became compulsory and was registered in the county court. If no arrangement could be brought about between the farmer and his creditors, the question could be brought before the commission of revision, consisting of a judge as chairman and of two other commissioners. The commission has full power to conclude an arrangement both for secured debts and for debts that are not secured, and this arrangement is final and compulsory.

The object of this law is to enable farmers who are overburdened with debts but are not in a desperate situation to remain on their farms and to resume their work in less unfavourable conditions.

Up to 1 October 1935, nearly 90,000 farmers had applied to the Official Receivers for information, and about 16,000 had presented concrete proposals for the settlement of debts. Out of this number, 10,625 farmers arrived at definite agreements. The proposals submitted involved a total indebtedness exceeding \$70,000,000. The reductions made on this sum as a result of the meetings of creditors and of the decisions of the Board of Review amounted to about \$12,000,000 (1).

With the same object of relieving the farmers, the Farm Loans Laws have been amended so as to increase the total amount that can be lent by the Dominion Farm Loan Board from \$15,000,000 to \$40,000,000 and to raise the sum that can be advanced to any borrower from 50 per cent. of the value of the security to 60 per cent. with a maximum of \$7,500. The Board has also the right to grant loans on second mortgage with the object of enabling a farmer to resume his work.

The new legislation also prescribes that the farmers can completely redeem the mortgages at any moment (with remission of interest for three months) and that if the creditor refuses to accept the repayment the interest will be automatically reduced to 5 per cent.

United States.

As is well known, American agriculture received a great impetus during the war owing to the fact that the North American Continent was called upon to supply the belligerent countries with foodstuffs and textile fibres. This sudden large demand for products required the clearing and transformation of about

(1) F. W. FIELD, C. M. G.: Report on Economic and Commercial Conditions in Canada (1935-1936). Department of Overseas Trade. London, 1936. — GÉRARD FILION : La revision des dettes agricoles. *L'Actualité Economique*, octobre 1936, Montréal.

40,000,000 acres of uncultivated land or pasture land. This fact, encouraged by the continual rise in the prices of products, brought about an active movement in the purchase of land by farmers, at the high prices that then prevailed. This was made possible by having recourse to a large extent to credit, which at that time was freely available; but heavy indebtedness resulted and the contraction of prices that followed rendered this indebtedness quite excessive and unbearable. In fact, after the year 1920, as the gradual restoration of agriculture in Europe had led to a decline in the demand for North American agricultural products, considerable stocks began to accumulate, with disastrous effects on the prices. As prices remained for a number of years at unremunerative levels, many farms became bankrupt, and almost the whole agricultural industry fell into a state of distress on account of the impossibility in which the farmer found himself of meeting the mortgage engagements entered into in 1920, when the level of prices and the cost of money were higher than at any time since the beginning of the century.

A confirmation of the economic distress of the farmers in the period we are considering is afforded by the decline in the agricultural income, particularly in relation to that of other classes. In 1919, the income of the agricultural class amounted to 18 per cent. of the national income, which in that year was estimated at \$66,000,000,000. In 1921, the national income fell to \$63,000,000,000, whilst that of agriculture was reduced to 11 per cent. of the total. In 1928, the national income had risen to \$88,000,000,000, while the agricultural income fell to 9.3 per cent. of the total. In 1932, the total income was reduced to about \$44,000,000,000, and that of agriculture to about 7 per cent. of the total. But while farm income had undergone these reductions, the mortgage debts and the taxes of farmers had remained at the same high levels as in 1920.

Agricultural mortgage indebtedness was estimated in 1932 at about \$8,500,000,000, the total agricultural debt being probably \$12,000,000,000 (1). This latter sum, which is far higher than the farm income of the year, threatened to ruin both debtors and creditors. But the many measures relating to credit adopted by the Federal Government succeeded in improving the financial position of both classes.

The central administrative body to which the carrying out of the new agricultural credit policy of the United States was entrusted was the Farm Credit Administration, established by Executive Order of the President No. 6084, which was submitted to Congress on 27 March 1933 and which became effective on 27 May 1933. Two tasks were assigned to the Farm Credit Administration. The first was the creation of a system of completely unified credit institutions on a permanent basis to supply to farmers and to farmers' organisations credit

(1) YEARBOOK OF AGRICULTURE, 1935. United States Department of Agriculture, Washington, 1935. — DAVID L. WICKENS, Agricultural Economist, Division of Agricultural Finance: Farm Mortgage Credit. Technical Bulletin No. 288. February 1932. United States Department of Agriculture, Bureau of Agricultural Economics, Washington, D. C.

adapted to their special needs at the lowest cost compatible with sound business practice. The second task was the emergency financing necessary to meet the credit crisis resulting from the general economic depression. The aim of this financing was to facilitate the adjustment of the excessively burdensome farm mortgage debt and to reduce the rates of interest.

The importance of the refinancing carried out since the establishment of the Farm Credit Administration (1) is shown by the fact that in the period from 1 May 1933 to 31 December 1934 the Federal Land Banks and the Land Bank Commissioner granted 575,840 loans to a total amount of \$1,494,454,231. The number and amount of the loans granted each month increased rapidly after May 1933 and reached their maximum in the first six months of 1934, loans for more than \$150,000,000 being granted in March and June.

Many applicants were indebted beyond the maximum allowed by the law. In order to enable them to obtain the maximum of the new loans, it was often necessary for the creditors to allow scale-downs of the principal owing to them. In nearly 16 per cent. of the loans granted by the Federal Land Banks and by the Land Bank Commissioner between 1 May 1933 and the end of December 1934 reductions of the principal were obtained. These reductions amounted to more than one fourth of the indebtedness of the farmers who obtained these adjustments. These transactions were to a large extent carried out through the medium of 2,700 county committees for the adjustment of farm debts in 45 States.

A second phase of the plan of refinancing relates to the reduction of interest charges on farm mortgages. Farmers who were already indebted to Land Banks obtained the benefit of the emergency reduction of the rates of interest. For those obtaining new loans the two main advantages provided—refinancing of the indebtedness and reduction of the rates of interest—were combined, since the farmers who had loans refinanced generally did so at reduced rates of interest.

The reduction of the interest had the effect of reducing the proportion of the gross income that was absorbed by the fixed charges. It is estimated that the reduction in interest charges on interest-bearing debts refinanced by the land banks and the Land Bank Commissioner from 1 May 1933 to 31 December 1934 amounted to more than \$20,000,000 a year, a saving of a fourth of the interest previously paid.

Moreover, the reduction of the rate of interest to 4 $\frac{1}{2}$ per cent. for five years, as from 1 July 1933, will amount to a saving of about \$9,900,000 a year to borrowers from Federal Land Banks with loans outstanding on 12 May 1933. The further reduction in the rate of interest to 3 $\frac{1}{2}$ per cent. for the

(1) B. R. STAUBER, Agricultural Economist, and M. M. REGAN, Associate Agricultural Economist: *The Farm Real Estate Situation, 1934-35*. Circular No. 382, December 1935. United States Department of Agriculture, Bureau of Agricultural Economics, Washington, D. C. — *Statements of Condition of Federal Land Banks, Federal Farm Mortgage Corporation, Federal Intermediate Credit Banks and Descriptive Summary of Production Credit Corporations and Associations, Banks for Cooperatives*, December 31, 1935. Farm Credit Administration, Washington, D. C.

year beginning 1 July 1935, will bring additional savings of about \$20,000,000 for the first year on loans granted by the Federal Land Banks, and about half that sum will be saved during the other two years, during which the emergency rate of 4 per cent. is applied. Loans refinanced currently will involve savings due in part to the emergency rate of 3 ½ per cent. and in part to the low contract rate of 4 per cent.

In addition to reductions of interest, provision was also made for the deferment of the payment of the portion of the instalments representing principal on loans outstanding on 12 May 1933 or granted during the two following years, provided the loan is otherwise in good standing.

On 31 December 1934 the deferments granted affected a sum of \$14,060,419. In other cases, in which the borrowers were unable, through no fault of their own, to pay the interest due and the instalments of capital, the Banks could allow extensions of time. Extensions of this kind in force on 31 December 1934 affected a total sum of \$35,140,928.

Apart from the benefits obtained through interest reductions, the making available of credit in itself had far-reaching effects, the most important of which was, perhaps, that of reducing the number of distressed farms and facilitating their withdrawal from the real estate market.

The general improvement that took place in the economic conditions of agriculture in the United States from 1934 onwards (1) had also a favourable effect on the credit conditions of the farmers. In spite of the extremely serious drought in the summer of 1934, which greatly reduced the volume of the crops, farm income increased, not only as the result of the benefit payments that the farmers received in exchange for the participation in the various adjustment programmes, but also by reason of the rise in prices, which compensated for the decrease of production.

The total gross income from agricultural production, including rental payments and benefit payments, was \$7,300,000,000 in 1934 as compared with \$6,406,000,000 in 1933.

The number of bankruptcies amongst farmers in 1934 was 20 per cent. smaller than in 1933, and while 9 per cent. of the farmers became bankrupt in 1933, only 8 per cent. became bankrupt in 1934. This is a further indication of improvement in the financial position of the farmers.

This improvement is also indicated by the decrease in the number of applications for the special refinancing of farm debts. The highest number of applications for refinancing was reached towards the end of 1933, when more than 20,000 applications a week were received. From that time the number of applications fell almost continuously, reaching the low level of about 3,000 a week in June 1935 (2).

(1) See the report of Messrs. STAUBER and REGAN, already cited, on "The Farm Real Estate Situation," for 1935-36. Circular No. 417, October 1936, United States Department of Agriculture. Washington, D. C.

(2) FINANCING AGRICULTURE IN 1935. Farm Credit Administration. United States Government Printing Office. Washington, D. C., 1936.

G. — SOUTH AMERICAN COUNTRIES.

Argentina.

The economy of the Argentine Republic, which is mainly based on cereals and live stock, strongly felt the effects of the fall in prices on the world market. Internal prices, according to the general index-number of the prices of the principal export products, showed, at the end of 1933, a fall of 33 per cent. as compared with the average level of 1929. In certain cases, for wheat and maize, for example, the prices were not sufficient to cover the costs of production (1). Consequently the farmers could not pay their debts and were compelled to restrict their purchases; thus the distress from which they suffered affected the other sections of the national economy. All superfluous expenses, in fact, practically disappeared from the life of the farmer, and works were carried out on a more scientific and more economic standard. Amongst other effects, with a view to reducing the cost of production, a tendency has shown itself in recent years to substitute the system of renting land by payment of a percentage of the crop for the system of cash tenancy. In 1928-29, the number of cash-rented farms was 38,178 and that of share-rented farms 50,179; in 1932-33, the numbers were 27,808 and 54,391 respectively.

Another characteristic feature of the crisis period has been the reduced employment of labour, the farmer seeking to be self-sufficient, by utilising to the maximum the work of his family and thereby effecting a reduction in the wages paid to regularly-employed agricultural labourers.

No special statistics are available on the indebtedness of the farmers, but it is certainly heavy and widespread. As regards the class of landowners, indebtedness has doubtless reduced the income of the large and small *estancieros* and *cabañeros*, who are obliged to forego many of the conveniences and amenities of social life that they formerly enjoyed. But the form of indebtedness that weighs most heavily on the rural classes is the debts contracted with private individuals. It must be noted, in the first place, that in the interior of the country, the bank of the settler and small farmer is the store selling provisions and other commodities where they buy all the year round what they have need of for their maintenance and that of their families and for their farms—food, clothing, seeds, ploughs, etc.; these purchases are made on credit, for the small farmer, by reason of the fluctuations in crops and prices, has not succeeded in putting aside the means necessary for working his farm. Repayment of the credit in question becomes due at harvest-time and if the storekeeper is also a grain-merchant, the crop is handed over to him in kind; otherwise, the crop is sold as soon as possible in order to pay the old debt, and a new debt is immediately contracted. Now, as long as wheat was sold at a price exceeding

(1) The value of rural property has decreased considerably in recent years; the decrease has amounted to as much as two-thirds, as has been the case in the National Territory of La Pampa, in the course of five years.

6 pesos the quintal and other cereals at corresponding prices, there remained to the producer a margin that enabled him to meet some extra expenses (purchase of an agricultural machine, of a motor-car, etc.); but from 1930 onwards the situation changed; the receipts from the sale of the product no longer covered the credit granted by the storekeeper, and the difference which remained unpaid was carried over from one year to another. The small agricultural producer, cultivating an area of 100 hectares and more, who represents, so to speak, the most numerous element in the Argentine rural system, finds himself entirely at the mercy of the retail dealer. Hence results a general state of distress which sometimes reaches a critical phase, as in the summer of 1931-32, when large numbers of settlers threatened to abandon the harvest, which would not even cover the cost of cultivation.

This situation did not fail to cause considerable anxiety to the public authorities. Hence the origin of that vast plan of economic action drawn up by the Government with the object of meeting the crisis from which the country was suffering; the carrying out of this plan was entrusted to the following bodies: *Junta Reguladora de Granos, Junta Nacional de Carnes, Junta Reguladora de la Industria Lechera, Junta Reguladora de Vinos, Junta Nacional del Algodón, Comisión de Productos Alimenticios Nacionales, Comisión Nacional del Aceite, Comisión Nacional de Fruticultura.*

The plan embodies a policy of economic adjustment and of moderate intervention of the State in the economic system. The measures adopted for forming a reserve fund with the help of the profits on the transactions in foreign bills, with a view to maintaining the basic prices of the principal Argentine products have resulted in sufficiently protecting the producers against any new collapse of prices.

For improving the credit conditions of the rural population the most effective measure was the authorisation given in 1933 by the Government to the Bank of the Argentine Nation to grant loans, through the medium of its Agricultural Credit Section, in order to encourage agriculture, stockbreeding and rural industries, such loans being secured by the pledge of the agricultural product already harvested or still standing (1). In addition to these measures, two Laws, Nos. 11,720 and 11,741 must be mentioned.

By the first of these Laws, promulgated on 26 September 1933, the commission of 1 per cent. charged on loan transactions by the *Banco Hipotecario Nacional* was suspended for a period of three years, as from the entry into force of the Law, for the benefit of debtors who regularly fulfil their engagements. During the same period, the debtors of the said bank were not required to pay the half-yearly instalment of $\frac{1}{2}$ per cent. fixed for the amortisation of their loan.

The management of the Bank was authorised to conclude agreements with its debtors for the payment of arrears and to allow, in this case, periods of repayment not exceeding ten years.

(1) EL DESARROLLO ECONÓMICO-FINANCIERO DE LA REPÚBLICA ARGENTINA EN 1935. *Economía*, Vol. I, No. 3. Buenos Aires, February 1936.

The Bank can wait three years, after foreclosure on a mortgaged property, before proceeding to the final liquidation of the loan transaction. Up to the moment of the final liquidation, the debtor has the faculty of redeeming his property by paying off the debt.

The Government was authorised to pay a sum of 30,000,000 pesos m/n, in internal public debt bonds to the Bank, which must provide for the payment of interest and amortisation on the bonds utilised.

The second law, dated 28 September 1933, laid down that engagements guaranteed by mortgage that had already become due or that, before the law came into force, had become liable to be called up on account of the non-payment of interest or of the stipulated amortisation payments, should be postponed for a period of three years from the date on which the law came into force. The same provision was made in regard to mortgage engagements existing on the day when the law came into force which, within a year from that date, become due or become liable to be called up for the reasons above indicated.

To benefit by the measures above described, the debtor must not be more than two years in arrears in the payment of agreed interest nor more than one year in arrears in the payment of taxes.

The payment of interest can only be enforced by legal process if the amount claimed is not less than the equivalent of six months' interest.

The maximum rate of interest that can be demanded during the period of the application of the law is 6 per cent. per annum.

At the end of 1936, a new law, No. 12,310, extended for two years both the general moratorium of three years for mortgage debts decreed by Law No. 11,741 and the special moratorium for debtors of the *Banco Hipotecario Nacional*, decreed for the same period by Law No. 11,720.

This recent measure was adopted by Congress with the reservation that in the interval an organic law on the subject was to be drafted aiming at the final liquidation of many important financial situations, which for a long time past have fallen into the economic absurdity of an income that is not even sufficient to cover the interest on the debt.

Brazil.

The vast programme for the economic adjustment of the country carried out by the Federal Government has involved, amongst others, measures directly intended to relieve the conditions of the farmers. Amongst such measures, Decree No. 23,533 of 1 December 1933 was of fundamental importance; it reduced by 50 per cent. all the debts of the farmers contracted before 30 June 1933 on the security of real property and also all debts contracted after that date in order to renew previous debts.

This reduction also applied to debts contracted with banks in the event that the debtor finds himself in a state of insolvency.

All persons or corporate bodies who, on their own account and for purposes of gain, carry on agriculture or stockbreeding, are considered as farmers (Decree No. 23,981 of 9 March 1934) even if, apart from so doing, they are also en-

gaged in the conditioning or industrial transformation of agricultural products.

Owners of rural properties who have rented them to third parties and do not themselves directly engage in agriculture are excluded, except in cases in which the debt was contracted or renewed during a period in which they were engaged in agriculture.

In order that the creditors should not suffer any loss, the Government indemnified them by the issue, up to a total amount of 500,000 contos of reis, of bonds of the nominal value of 1 conto of reis, exempt from taxes, bearing interest at 5 per cent. per annum and repayable within a period of 30 years.

But while it was urgent to lighten agricultural debts, as we have shown, it was not less urgent to obtain for farmers, by organised credit, the necessary means for carrying on their vocation, relieving them from the necessity of contracting debts with private individuals on burdensome conditions. This need was recognised by the Federal Government, which has lately set up an Agricultural Credit Section at the Bank of Brazil. This section will obtain the capital required for its working by the issue on the national market of bonds redeemable at a fixed rate, negotiable on the stock exchange.

The Agricultural Credit Section is required to grant to farmers and to agricultural co-operative societies the loans of which they have need for purchasing seeds, fertilisers, agricultural machines, breeding stock, etc. Loans will also be granted to farmers to enable them to harvest their crops. The loans granted must, as a general rule, be repaid within 12 months. The amount of the agricultural loans must not in any case exceed one third of the estimated value of the crop immediately following the transaction. In cases of bad harvests or of calamities affecting the production, the management of the Agricultural Credit Section can decide as to the advisability of allowing a postponement of the dates of repayment.

H. — AUSTRALIA.

The situation of the wheat-growers in Australia has become extremely critical in recent years on account of indebtedness. Their situation was made clear by the Royal Commission on the Wheat, Flour and Bread Industries (1). They number more than 70,000, and 60,000 of them look to wheat-growing as their principal source of income. In 1933 their total debts amounted to about 150 millions pounds sterling and they have since considerably increased.

The Commission divided the wheat-growers into three classes: those who can pay their farming expenses and the interest on their debts when the price of wheat is not less than 3s. per bushel f. o. b. (40 per cent.); those who only succeed in paying a part of their expenses and of their debts (26 per cent.);

(1) ROYAL COMMISSION ON THE WHEAT, FLOUR AND BREAD INDUSTRIES. FIFTH REPORT, 1934-35-36. Commonwealth of Australia, 1936.

lastly, those who cannot produce at this price, even if they are entirely relieved of their debts (34 per cent.).

The total indebtedness, at the time of the publication of the Report of the Commission, exceeded by £15,000,000 the total assets of the wheat-growers.

The Commission studied the special causes of the difficulties that weigh upon the producers. Wheat-growing in Australia requires a somewhat large capital which, for the most part, is borrowed. The necessary funds for the purchase of land and the equipment of farms are obtained from the administration, from banks and from private individuals. The current equipment, the live stock, and the working capital have been obtained on the security of the crops or of the farm animals or of various pledges or simply on note of hand. Merchants have made advances secured by crops that have not yet been sold.

The Commission in question arrived at the conclusion that the only farmers who have been able to avoid incurring debts are those who have conducted their business with great economy and have combined wheat-growing with sheep-farming or other accessory forms of production during the period preceding the lean years. As to the others who have borrowed, their original debts must have been increased every year by the amount of the interest which they have no means of paying when it becomes due.

As regards the adjustment of debts, the same Commission recommended that procedure should be adopted whereby voluntary arrangements between creditors and debtors could be facilitated. For this purpose Debt Adjustment Courts were to be formed, presided over by a judge assisted by qualified advisers. These courts would decide case by case whether the farmer in question ought to be assisted. All the wheat-growers who showed a reasonable chance of again becoming prosperous and had need of assistance were to be assured of national aid, subject to the efficient conduct of their business; but if the court decided that there was no reasonable probability that the farmer would be able to produce wheat at a normal net cost, or that he did not seem to be in satisfactory condition, or for other reasons, then he was not to benefit by the protection of special legislation. It was proposed that this plan of assistance to debtors should continue in operation for seven years (1).

The Credit (Adjustment of Agricultural Debts) Act of 13 April 1935 laid down that a sum not exceeding £12,000,000 could be borrowed and that the proceeds of this loan could be granted to the States to be utilised in making payments to the farmers or on their behalf, in order to enable them to make voluntary arrangements with their creditors.

G. COSTANZO.

(1) The Report of the Royal Commission on the Wheat, Flour and Bread Industries, already cited, gives a summary of the legislation adopted by the States of the Australian Commonwealth with a view to the relief of agricultural debts.

ECONOMIC CONDITION AND POLICIES AFFECTING AGRICULTURE DURING THE WORLD ECONOMIC DEPRESSION

ECONOMIC DEPRESSION AND RECOVERY IN ARGENTINA

CONTENTS: I. Characteristics of the Argentine economy (p. 126); II. The Nature of the Argentine crisis (p. 128); III. The continuance of the crisis and the emergence of solutions (p. 131); IV. The period of recovery (p. 136); V. Conclusions (p. 139).

I. — CHARACTERISTICS OF THE ARGENTINE ECONOMY.

It is an easy task to draw analogies between Australia, the subject of our previous study, and Argentina. Both are large and relatively underpopulated countries situated in the southern hemisphere at a long distance from Europe, dependent to a large degree on the export of agricultural and pastoral products for their existence. Both may be termed young countries, not only as regards their comparatively short history but in the sense too that they do not appear to have approached the limits of their economic development. Not only have they both vast possibilities of expansion of agricultural production, which is likely to take place as world population increases or as standards of living in the world rise, but they are also beginning an expansion in a different direction, that is, in that of industrial production. Economic conditions and natural resources are indeed less favourable to industrial expansion than to agriculture. Argentina particularly has not the resources—coal, iron, etc.—for the building up of heavy industries. But factories producing the articles of everyday consumption are increasing in number and importance. Whatever form however the economic expansion of these countries may take, it will necessitate the assistance of the older countries. Before the world economic crisis of 1929, foreign capital in large amounts substantially assisted the development of each of these countries. If the world should return again to normal economic conditions, that process may be expected to repeat itself.

On the other hand, though fundamentally there is a remarkable similarity between the two countries, Argentina has a number of advantages over the rival continent, which partly explain the fact that it has a population about double that of Australia though its total area is only somewhat over a third. The greater proximity of the Argentine to its markets has given it an important advantage in the chilled beef trade, whilst its natural pastures and grasses, more abundant, make the rearing of high class cattle comparatively easy. On the other hand, its better distributed rainfall makes larger areas available to cereal growing and general pasture. Whereas the greater part of the Australian continent is waste land and desert, only about one tenth of Argentina is classed as unproductive land.

The principal products of Argentina are all among the most important agricultural products of the world market, and Argentina plays a leading role

in the world trade in each of them. In the period 1925-29 Argentine exports averaged about one fifth of the world total in the case of wheat, three fifths in the case of beef and veal, three fifths in that of maize, and about one sixth in the case of wool. Again, about 80 per cent. of total exports of linseed came from Argentina. The dependence of Argentina on these exports, as indicated by the proportion of production exported, is absolute. In the same period wheat production averaged 6.6 million metric tons whilst exports averaged 4.4 million. Maize production averaged 7.5 million metric tons and exports 5.5 million, whilst linseed production averaged 1.86 million metric tons and exports 1.62 million; and in 1929 wool production equalled 1.5 million quintals and exports 1.2 million, and, lastly in 1930, beef production equalled 7.9 million quintal and exports 3.5 million. Thus Argentina, like Australia, plays a dominant role on the world market for its products and at the same time is itself largely dependent on the world market.

Again, Argentine exports have to be sufficient not only to pay for the imports of manufactured and industrial goods but also to pay interest on past borrowings and to enable the country to build up a sufficient exchange reserve against bad harvests or low export prices. The course of the Argentine trade balance is the most significant index of the soundness or otherwise of the economic position of the country. At the end of 1929 it was estimated that some £432,000,000 of British capital was invested in the Argentine and some \$770,000,000 of American capital. Nevertheless before the outbreak of the world crisis, exports were developing so favourably that not only was it relatively easy to meet the interest and amortisation charges but it was possible also to build up gold reserves. The four years 1925-1928 were years of undoubted prosperity for producers and consumers and, consequently, for the State. The following figures shows the volume and value of Argentine exports in 1925-28, compared with 1913.

	Million metric tons	Million pesos (gold)
1913	11.8	519
1925	10.1	868
1926	12.3	792
1927	18.7	1,009
1928	17.0	1,054

The increase in the value of trade was used not to increase the value of imports but to build up gold reserves. In the same four years the total favourable balance equalled about 340,000,000 gold pesos, and a net balance of gold imported valued at 183,000,000 pesos. Thus the situation from this point of view was extremely satisfactory and reflected the prosperity of the farmer. Wheat growers were particularly benefiting from increasing exports and though maize exports reached their maximum in 1927, their volume in 1929 was substantially higher than in 1935. The course of wheat and maize exports is shown by the following figures (in million metric tons). As these show, wheat exports expanded continually

from the low level reached in 1926, whilst in the last four years shown maize exports were at a high average level:

	1925	1926	1927	1928	1929
Wheat (including flour)	3.18	2.22	4.45	5.52	6.80
Maize	2.94	4.91	8.34	6.37	5.05

Even in this period there were of course signs that some contraction was to be expected in the general economic well-being of Argentina, the outstanding sign being the decline in cereal prices which began around 1927 as a result of the shrinkage of a number of European markets (1). Further, the frozen beef market had steadily been contracting for a number of years, due less to trade barriers than to a definite change in tastes as regards meat in the principal market, the United Kingdom. These factors, though capable of checking optimistic belief in a period of perpetual expansion, were not of sufficient significance to be really alarming, for Argentina could count not only upon some of the best agricultural and pastoral lands in the world but also on the fact that it always had a substantial advantage as regards production costs over its chief rivals. Neither tariff nor wage policy, nor transport costs, had the same importance as in certain other countries in keeping up the costs of agricultural production. Consequently Argentina appeared likely to feel the burden of a moderate shrinkage of world markets less than many other exporting countries.

Nevertheless when the severe contraction which we call the world economic crisis took place, Argentina was one of the first countries to suffer heavily and by no means one of the first to take the upward path. The reasons for this particular reaction should be seen from what follows.

II. — THE NATURE OF THE ARGENTINE CRISIS.

The severity of the Argentine crisis is explained by a combination of circumstances: by the fact that the first crisis year 1929-30 coincided with a bad cereal crop in Argentina, and that its principal exports—the cereals—were precisely those which were the latest to recover on the world market. Again the world industrial recovery which began about 1933 could not bear so directly on Argentine economic conditions for, unlike the case of Australia, wool does not play such an important role in the Argentine economy. Whereas the recovery in wool was, as was seen in our previous article, of special importance for Australia, it would not be of the same importance for Argentina. For, whilst wool represents over 30 per cent. of Australian exports, it represents less than 10 per

(1) "Agricultural Protectionism and the Agricultural Situation 1925-29." *Bulletin of Agricultural Economics and Sociology*, March, April and May 1936.

cent. of Argentine exports. Since those pre-crisis phenomena mentioned above—tariff and other trade barriers, and the decline in the demand for beef—were accentuated during the crisis, they consequently bore particularly heavily on Argentina. In the last quarter of 1929 the world prices, as measured by Liverpool quotations, of Argentina's two principal crops began to slump and remained low throughout the season. In July 1929 Plate wheat was quoted at 46s. 7d. per quarter. In June 1930 the quotation was 37s. Between the same dates the maize quotation fell from 39s. 1d. to 24s. 3d. It would be difficult under the best circumstances to compensate for such a decline in prices by a larger crop. But the harvest conditions were anything but the best. Drought and crop diseases and unseasonable rains reduced crops and exportable surpluses to the extent shown by the figures below of production and exports (in million metric tons).

	Production		Exports	
	1928-29	1929-30	1929	1930
Wheat	9.5	4.4	6.8	2.4
Maize	5.9	7.1	5.1	4.7
Linseed	2.0	1.3	1.6	1.2

Thus both the wheat and linseed crops were heavily reduced as compared with the preceding year, and, though the maize crops actually increased, wet weather coming late in the day seriously deteriorated the quality of the crop. Exports of all three showed substantial contractions.

In view of the price fall, noted above, it may be said that both as a result of local and world factors the Argentine economy was severely shaken.

The first results of this unfavourable export situation were a fall in the value of exports, an adverse balance of trade, the export of almost all the gold that had been accumulated in the previous four years and a fall in the value of the Argentine peso. By the middle of 1930 the peso showed a depreciation of about 15 per cent. The internal situation was of course not better, for the burden of overseas indebtedness of farmers and public bodies grew whilst the means of meeting it diminished. The shrinkage in total value of the crop implied a shrinkage in land values, railway and taxation receipts whilst the decline of imports, even though this was not proportionate to the decline in exports, involved a contraction of governmental revenue.

The depreciation of the exchange, however, tended to prevent the price fall of Argentine products on the overseas market being felt to the same extent in Argentina. Indeed the price of wheat in Buenos Aires was higher in January 1930 than in any month of the previous year, and in June 1930 the price though lower than in January, was substantially higher than in June 1929. This partly explained the fact that the main hopes for recovery were placed upon better crops in the following year, and indeed the high prices resulted in increased sowings for the next harvest year. Consequently no particularly important measures were adopted to stop the drift in the exchanges and in the public finances or to reduce imports.

A political revolution in the last part of 1930—one indication of the seriousness of the situation—brought the promise of severe measures to meet the crisis. But again, before effective steps could be taken, the situation deteriorated still further, owing to the fact that the world crisis became, in 1931, even more intense than in 1930.

The hopes maintained in Argentina of larger crops and an increased volume of exports in 1930-31 were to some extent fulfilled. The wheat crop increased to 6.3 million metric tons, an increase of over 40 per cent. The maize crop increased to a record level of 10.7 million metric tons—an increase of over 50 per cent.; whilst the linseed harvest brought in 2.0 million metric tons, representing an increase of 54 per cent. over the previous year. Wheat exports in 1931 increased to 3.8 million metric tons; maize exports more than doubled, reaching 9.8 million metric tons, and linseed exports increased to 1.9 million metric tons. Wool exports too slightly increased but beef exports continued the decline which had been in operation almost since the first post-war years, reaching a level of only 491,000 metric tons compared with 549,000 in 1929 and 773,000 in 1927. But the extent of the fall in prices of Argentina's exports on the world market was such that though the total volume of exports increased by nearly 70 per cent. compared with the previous year, the value of exports increased only from 614 million gold pesos to 641 millions, or by only about 4 per cent. Nevertheless an important fall in imports—the natural consequence of the diminished purchasing power of Argentina—resulted in a favourable balance of trade, though by no means sufficient to bring the balance of payments into equilibrium, for it was still necessary to ship gold in order to pay the debt service and prevent what was regarded as excessive currency depreciation. Between November 1930 and December 1931, gold to the value of 244 million paper pesos was exported by the Government for the payment of interest and amortisation charges, whilst between October 1930 and August 1931 the *Banco de la Nación Argentina* in agreement with the Government, shipped gold equivalent to 418 million paper pesos in order to check the depreciation, whilst further gold shipments were made by other banks. The seriousness of these shipments is seen when it is observed that in 1928 some 80 per cent. of the note circulation was covered by gold whereas in 1932 only about 50 per cent. was so covered. By these measures the exchange was certainly prevented from falling too far, but this meant that the heavy fall in prices now became very apparent even in terms of the national market, or in terms of the paper pesos, and that the increased harvest did not prevent the financial position of the farmer from getting still worse. In fact the prices in Buenos Aires of the three grain crops fell between July 1930 and June 1931 from 5.89 pesos per quintal to 3.82 pesos in the case of maize; from 9.97 pesos per quintal to 5.96 pesos in the case of wheat, and from 17.05 pesos per quintal to 10.62 pesos in that of linseed.

The situation of producers of other agricultural commodities was hardly better. It will be seen that the agricultural and economic problem of Argentina, as in other countries, was intimately bound up with the problem of the regulation of the exchange rate.

III. — THE CONTINUANCE OF THE CRISIS AND THE EMERGENCE OF SOLUTIONS.

The first important step taken to control the situation was the establishment in October 1931 of the Exchange Control Committee which was empowered to control all dealings in exchange. In November the exchange rate was "pegged" to the United States dollar at the rate of 171 gold pesos to \$100. With this measure it was hoped both to prevent further depreciation and reduce the value of imports. Events in 1932 and 1933 however proved that this attempt at stabilisation was premature, for Argentine trade continued to suffer, both from the low prices which continued to prevail on the world market and by the growth of trade barriers.

Already in 1930 and 1931 Argentine exports had been severely hit by rising barriers in all her principal continental European markets, which affected all the cereal crops. Not only were tariffs raised to unprecedentedly high levels but new devices, such as import quotas and milling quotas (under which millers were obliged to use defined percentages of domestic grain) were introduced in a number of countries. The worst blow however in this regard fell in 1932, when the United Kingdom reversed its traditional policy of free trade and adopted in March 1932 the Import Duties Act, and, pursuing a policy of Imperial Preference, raised tariffs again in accordance with the Ottawa Agreements. The United Kingdom, as is well known, is the principal market of Argentina and takes normally more than one third of the total exports of that country. From the point of view of the Argentine the Act giving effect to the Ottawa Agreements was even more important than the Import Duties Act, for this had omitted wheat and maize, though striking the cereal flours. Under the terms of the Ottawa Agreements a 10 per cent. duty was levied upon maize whilst a duty of 2s. per quarter (480 lbs.) was levied on wheat, the British Dominions however being exempted from the duty. Thus the competitive position of Argentina in respect to its main rivals as regards wheat was definitely weakened. At the same time the United Kingdom agreed to limit the imports of foreign chilled beef to the quantities imported in the year ending June 1932, and to restrict by degrees the importation of frozen beef. The imports in the first quarter of 1933 were to be equivalent to 90 per cent. of the first quarter of 1932; whilst the percentage was to fall each quarter until in the second quarter of 1934 it was to equal 65 per cent. of the corresponding quarter of 1932. Further it was agreed to impose no duties on imports of beef coming from the Dominions before August 1937 at the earliest. These measures affecting imports were supplemented by new measures designed to increase domestic agricultural production in the United Kingdom. Thus by the end of 1932 Argentina had not only suffered from increased trade barriers but had also to face the prospect of permanently reduced markets for her staple exports.

In 1932 and 1933, for the third and fourth years in succession, the trade situation again worsened, in part as a consequence of these developments in European tariff policy, in part as a consequence of shorter crops and, lastly, as a consequence of the exchange policy in Argentina which was not successful in

reducing imports sufficiently. In 1931-32 unfavourable prices resulted in a reduction of the sown areas in maize and wheat and the crop was reduced to 7.6 million metric tons in the former case and 6.0 million metric tons in the latter. The volume of all exports in 1932 fell from 18.5 million tons to 15.8 millions, due chiefly to a heavy drop in maize exports. In spite of a slight improvement in wheat prices the low export volume and lower prices for the other products resulted in a further contraction of the value of exports, from 641 million gold pesos to 566.6 millions. In 1932-33 production of maize again fell, but wheat production rose somewhat. Exports of maize suffered another large fall in 1933 going down to only 5 million tons. Exports of linseed also fell, from 2 million tons to 1.4 millions, so that in spite of an increase in wheat exports, total Argentine exports declined in volume once more, to only 13.8 million tons. Even in paper pesos the value shrunk, falling from 1,288 millions in 1932 to 1,121 millions in 1933. Prices in Buenos Aires now reached extremely low levels. Thus in 1933 wheat averaged 5.77 paper pesos per quintal compared with 10.13 in 1929, whilst maize averaged 3.99 paper pesos against 8.04 pesos in 1929; linseed 10.57 pesos against 18.25, beef 10.98 against 23.52 pesos. Thus in both years low volume and low prices combined to put the Argentine economy in a precarious state.

Owing to these large falls in exports, the pegging of the exchange at a depreciated rate was not sufficient to restore equilibrium in the balance of payments. Though the trade balance grew more favourable in both these years, the Exchange Control Committee apparently did not find itself in a position to obtain sufficient exchange to meet the claims of exporters to Argentina. As a result of these factors the value of blocked peso accounts awaiting transfer increased considerably both in 1932 and 1933. The Argentine Government was however not slow in making advantageous use of these funds, as may be seen from the Roca-Runciman Convention concluded in May 1933, between Argentina and the United Kingdom. This agreement, the principles of which were copied by a number of other countries in subsequent years, besides containing a reciprocal undertaking not to impose further import duties—particularly important for Argentina, as was shown in 1934-35 when the British Government was obliged in consequence of the agreement to subsidise beef producers instead of reducing imports—contained provisions which resulted in the funding of the blocked balances due to the United Kingdom, and subsequently, also to the United States and European countries. The Convention provided that whenever any system of exchange control was operative in Argentina, the full amount of the sterling exchange arising from the sale of Argentine products in the United Kingdom should be made available for meeting applications for remittance to the United Kingdom, after the deduction of a reasonable sum annually towards the service of the Argentine public external debts payable in countries other than the United Kingdom (1). The process of funding began in October 1933 with the British

(1) See *The Economist: Argentina Supplement*, January 1936. THE ECONOMIC CONDITIONS IN THE ARGENTINE REPUBLIC. March 1935. Department of Overseas Trade. London 1935.

debt and continued with the funding of the debts to the United States and other countries. One important effect of this process was that it provided the Argentine Treasury with liquid funds at low interest rates. In January 1934 further agreements funding the debt were made with Belgium, Holland, Switzerland and Germany and, in December 1934, with Spain. These agreements represented the establishment of the important principle of making debt payments directly dependent on exports to the creditor country, and resulted increasingly in Argentina's exchange policy being directed to distributing exchange according to the value of purchases of Argentine products, representing the trend which has been predominant in the last few years from multilateral to bilateral trade.

This system was implemented by new legislation at the end of 1933 made necessary by the still unsatisfactory state of the exchanges and by the extremely unsatisfactory position of the farmers. The exchange rate still appeared too high to prevent the accumulation of blocked funds, whilst some means of obtaining a rise in prices for the farmers was imperative. On November 10, 1933 a decree was issued setting up a system of prior exchange permits. Importers would make applications for exchange on ordering their goods, and those importers who were granted prior permits would be able to obtain the exchanges as soon as the goods had passed through the customs. The number of prior permits was made to depend upon the available foreign exchange. By this method importers would be discouraged from importing unless they had the certainty that they would be able to obtain the exchange. Under the previously existing system importers felt sure of getting exchange at the official rate, and since this rate was not high they were consequently encouraged to import values for which exchange was not available. Hence the growth of blocked accounts.

In the same month other measures were adopted. A Grain Board was set up with authority to purchase on Government account wheat, maize and linseed at basic peso prices somewhat higher than the prevailing market prices. Further reorganisation of the exchange market was of the utmost importance for this scheme. Firstly the official buying rate of exchange was further reduced—as we have seen, a necessary step. Secondly the Exchange Control Committee was authorised to auction the exchange each day to importers and other authorised holders of official permits. The selling rate thus obtained, which was always higher than the buying rate, left a profit to the Government which was to be used both to meet the additional cost of overseas debt as a result of devaluation *and the losses on the purchases of grain by the Grain Board*. Thus a system was found combining equilibrium of the exchanges with direct assistance to the farmer.

Among the factors bringing about the improvement in the economic conditions of Argentina in the years succeeding 1933 which will be described below, these efforts in respect of trade and exchange regulation are not the least important. This tendency towards reorganisation had however also manifested itself in other directions during 1933. Indeed it may be said that if 1933 were the worst year of the crisis, it was also the year in which the foundations were being laid for future progress, in which reorganisation in every sphere in preparation of an eventual recovery was proceeding at a rapid rate. By this year public

finance had been brought into something like order. The crisis itself had brought budget deficits on the three years 1929-31 amounting to 645 million pesos. By 1933 this deficit had been reduced to only 20.5 millions. Again, the fact that Argentina had always met its public overseas debt was to bring its reward not only by making possible the funding of the blocked accounts but also in subsequent years, when conversion schemes were successful in reducing the debt. The farmer was given time to take breath by a declaration of a three year moratorium, which checked the inevitable crisis tendency towards liquidation or sale of farms which could not meet the obligations which had been contracted in more prosperous times. At the same time costs of production in all aspects—wages, rents and interest—were being reduced to the lower levels necessitated by the lower sale prices. Some figures may be given which illustrate the extent of the adjustments in costs which had been brought about by 1933-34. The reductions in costs shown by the table below were obtained principally through reduction in rents and wages, though in some cases the greater application of mechanical appliances also contributed in this direction (1). Some further assistance was given to farmers in the middle of 1933 when the Government authorised the *Banco de la Nación* to grant loans for the encouragement of stockbreeding, arable farming and rural industries. Loans were granted on relatively liberal terms for the purchase of seed, for harvesting, threshing and sacking grain, for stockbreeding and for the purchase of dairy cattle and towards the expenses of shearing sheep.

	1931-32	1932-33	1933-34
Cost on farm (pesos per quintal):			
Wheat	6.00	5.36	4.78
Maize	3.86	3.56	3.24
Linseed	8.73	7.34	6.87
Total cost at port (pesos per quintal):			
Wheat	7.23	6.59	6.01
Maize	4.78	4.49	4.17
Linseed	9.99	8.60	8.13

In Argentina, as in many other countries, the crisis gave a stimulus to the reinforcement of old, or the setting up of new mechanisms for the control of marketing. Of these the foremost were the National Meat Board and the Grain Board, set up in October and November 1933 respectively. Both of these arose in part out of the dissatisfaction of the farmers—which always became particularly vocal during periods of falling prices—with the existing organisation of selling, by which the bulk of the grain and meat was sold to a small number of large exporting firms, which, holding what was almost a monopolistic position, were often, in

(1) For greater details concerning reductions in costs see the section on the Argentine in THE WORLD AGRICULTURAL SITUATION 1934-35. International Institute of Agriculture, 1936.

the eyes of the farmers, able to keep down the prices paid to them. The setting up of Boards was intended not to raise prices on the world market by monopolistic action but to secure to the farmers a higher proportion of the price of their product. The Grain Board was empowered to intervene to keep prices from falling below defined minima. The Meat Board, financed by a tax on stock farmers in proportion to livestock-sales, was to defend the interests of those farmers in a variety of ways—particularly against the meat-packers. To this end the Board formed in October 1934, the Corporation of Argentine Meat Producers of which stock farmers were shareholders according to their contribution to the above mentioned tax. During 1935 the efficacy of the corporation could be measured by the complaints made by the meat packers that the Corporation was bidding up prices too high. Though drought in the Argentine and elsewhere made this possible the existence of the Corporation probably enabled the stock farmers to make more use of such favourable circumstances than otherwise might have been the case.

In April 1934 a Dairy Farming Control Board was set up equally with the purpose of "defending" dairy farmers. Thus butter factories had to obtain licences from the Board and to publish the prices they would offer for butter fat. These measures were designed to stimulate competition for dairy produce. A sales tax was imposed on butter, the proceeds of which were used to pay a bonus to milk producers. In the same year and subsequently other measures usually involving a Control Board were taken to improve the selling price of wine, cotton, sugar, yerba maté and vegetable oils—in fact by 1936 almost every branch of Argentine agriculture was under the control of a state-organized body (1). Though, as we shall see below, the economic recovery in Argentina cannot be ascribed to them, in many cases they were successful in enabling farmers to feel immediately the benefits of improved conditions. The future only will show if they can avoid further crises of the type from which they resulted.

Certain other developments may be noted which, if not brought about by the crisis, were at least particularly stimulated by it. As has been pointed out above and amply demonstrated during the crisis, the overwhelming dependence of the Argentine on those products which are mostly affected by the crisis and by trade barriers can work to the disadvantage of the country in abnormal years. This fact gave a stimulus in some areas to the cultivation of other crops. Among these perhaps the most important is cotton. Since the war the area under this crop has been rapidly extended. Before the war only about 2,000 hectares were sown. In 1925-26 to 1929-30 the average had risen to 98,000 hectares. During the crisis itself there was an expansion each year, so that the area by 1934-35 had reached 286,000 hectares. Production in that year reached 64,000

(1) See also *THE WORLD AGRICULTURAL SITUATION IN 1934-35*. International Institute of Agriculture Rome 1936, pp. 124-135. S. G. HANSON. Farm Relief in Argentina. *Journal of Farm Economics*. August 1936. *ECONOMIC CONDITIONS IN THE ARGENTINE REPUBLIC*, Department of Overseas Trade. April 1936, p. 16.

metric tons compared with 25,000 metric tons in the pre-crisis years. This expansion was indeed so rapid that cotton growers found themselves in difficulties at a time when other producers were beginning to improve their situation.

This development in cotton growing was connected with an equally significant development in Argentina—a development common to most agricultural exporting countries during the crisis—namely the growth of domestic industry. Argentine industry divides into two branches: those connected with the export trade and agriculture, such as meat packing, milling, sugar refining, etc., and those connected with the production of goods for domestic consumption. The great war had given a stimulus to the latter, but with the restoration of industry in European countries competition from imports put a check to this growth. With the crisis, however, bringing with it a depreciation of the currency and emergency tariff measures domestic industry gained a new life. Expansion has taken place particularly in the cotton textile industry, which uses the greatly expanded domestic cotton production, in the woollen industry, the paper and cardboard industry and rubber industry. Some non-ferrous metal industries—lead and tin—are being developed almost to the satisfying of domestic needs. In all these industries imports have fallen considerably, whilst in some cases, as for example the tomato paste industry, even exports are being developed. A measure of progress in the cotton industry is given by the number of spindles which according to a private estimate (1) increased from 60,000 in 1930 to 200,000 in 1935 whilst in the latter year another 100,000 were being installed. Equally spectacular rates of growth occur in other directions. The expansion of all of these industries coincided with the decline of the corresponding imports. The conclusion which may be drawn from these developments in agriculture and industry is that the Argentina is progressing along the path of diminished specialisation and is seeking to minimise its dependence on a very restricted range of products for the production of which Argentine conditions are particularly favourable.

IV. — THE PERIOD OF RECOVERY.

The analysis so far has indicated that by the end of 1933 and the first part of 1934 reorganisation in Argentina had put the country in a better state either to resist more shocks or to benefit by improved conditions. Fortunately in the succeeding period the latter was the case: it is the purpose of the following to outline the character of the improvement which began in 1934.

The 1933-34 wheat crop was much larger than in the preceding year, reaching 7.8 million metric tons representing an increase of 1.2 million tons. The maize crop was slightly less, falling to 6.5 million metric tons, representing a decrease of 0.3 million tons, whilst the linseed crop improved slightly by 150,000 tons. Both wheat and maize exports however increased substantially in volume in 1934,

(1) Quoted in *The Economist*: *Argentina Supplement*. 8 February 1936.

wheat exports, in spite of the International Wheat Agreement of 1933, rising by 800,000 tons, and maize by 470,000 tons, linseed remaining practically stable. The total volume of Argentine exports improved from 13.8 million metric tons to 15.3 millions, the other items showing an important increase being oats and cattle hides. Several factors co-operated during this year to increase the value of these exports by an even greater percentage than the volume, for prices rose as a result of the devaluation of the peso, of the activities of the Grain Board, and of short world crops—particularly due to the failure of the North American harvest. The total value of exports indeed rose in 1934 to 1,438 million paper pesos, representing an increase of nearly 30 per cent.

The operations of the Grain Board were based on the principle of buying at officially established minimum prices from the farmers and selling at world values, the losses to be covered, as explained, from the profits of the exchange fund. Though it was not intended to accumulate stocks, the centralisation of selling made it possible for the Board to choose more favourable moments for disposing of the crops and to exercise thus a steadying influence on the market. As seen at the International Wheat Conference of 1933 and later, when Argentina exceeded her quota, Argentina, like Australia, did not trust the policy of attempting the exercise of monopolistic influence on world markets, or of holding back supplies.

The fixed minimum prices at Buenos Aires were, per quintal, 5.75 pesos for wheat, 4.40 pesos for maize and 11.50 pesos for linseed. As a result however of the devaluation of the exchange, maize prices rose almost immediately to the minimum and linseed prices above it. The operations of the Board were confined in the first instance therefore to the purchase of wheat. Until the middle of 1934 the Board was losing between 40 and 60 centavos per quintal on wheat. By that time however the price began to improve with the news of the probable bad harvests in North America. Having remained until May at 5.75 pesos per quintal it quickly rose, reaching in the second week of August, the maximum price since the outbreak of the crisis of 8.40 pesos, thereafter however declining, though always remaining well above the minimum price. In consequence indeed of this favourable turn of events the losses of the Grain Board in the first part of the year were much more than offset by its gains in the second part, so that on 28 November 1934, one year after the commencement of operations, the Ministry of Finance was able to announce a favourable balance of 43 million pesos on grain account alone. This sum was held in reserve against possible losses on the new crop, whilst the government decided to maintain the same minimum prices. These prices indeed had fallen below world prices but still formed a basis of security representing a level below which actual prices could not fall and one which was in general well above the reduced costs of production. During its first year the Board dealt with over 70 per cent. of the exportable wheat surplus.

The growing improvement in internal economic conditions during the year was reflected in a growth of imports, which rose from 897 million pesos to 1,110 millions. Nevertheless exports rose by more, so that the visible surplus of exports over imports rose from 224 millions to 382 millions, a fact which rendered easy the operations of the Exchange Commission. The utilisation of these fav-

ourable circumstances by the Commission resulted in profits of 91 million pesos in the first year—24 millions being used to meet the extra burden of the debt due to the devaluation and 1.7 millions in bounties to dairy producers. At the same time it was possible to build up a foreign exchange fund which was to be used like the British Exchange Equalization Fund, for the smoothing out of fluctuations in exchange rates.

The year 1935 saw a further marked improvement in the trade situation—and therefore in the general economic situation—for almost the same reasons as in the previous year. The 1934-35 maize crop was a bumper crop, that of linseed well over the average whilst the wheat crop was a good average crop. World factors again worked favourably to the Argentine, for not only were world crops again short as a result of drought and bad conditions but general economic recovery had become fairly definitive. Prices of wheat, linseed and beef were again higher. Thus though exports of wheat fell somewhat in volume, the fall in value was much slighter. Again the volume of chilled beef exports remained practically unchanged, yet their value increased by well over 25 per cent., and whilst the volume of linseed increased considerably the value increased still more. On the other hand the bumper maize crop sent down prices so that the increase in value was not proportionate to the increase in volume. Total Argentine exports show an increase both in volume and value. The following figures show more precisely the character of the improvement in these exports.

Products	1934		1935	
	Volume million metric tons	Value million pesos	Volume million metric tons	Value million pesos
Wheat	4.8	295.3	3.9	273.8
Linseed	1.4	179.5	1.8	215.9
Maize	5.5	301.6	7.1	321.7
Chilled beef	0.35	127.1	0.35	161.2
Total exports	15.3	1,438.4	16.2	1,569.3

Imports too increased slightly, and once more the surplus of exports over imports increased, this time from 328.5 million pesos to 477.9 millions. Profit in the exchanges and the exchange fund again increased.

A concomitant of the recovery was the improved financial situation of the central government, due to conversions, consolidations, to the introduction of income tax and economies. In reporting on the Budget Bill for 1936—in which the 1935 estimates were readopted—the Chairman of the Senate Finance Commission claimed for the Government the following imposing achievements: the budget deficit been reduced from 329 million pesos in 1930 to 200,000 pesos in 1934; the floating debt from 1,207 million pesos to 117 millions by the middle of 1935:

the public debt service from 288 millions in 1933 to 231 millions in 1934. More credit in consequence was found for public works. Yet total expenditure fell from 1,056 millions in 1930 to 937.6 millions in 1934. The financial year 1935 actually closed with a budget surplus of 27 million pesos (1). The financial reorganisation, which by reducing rates of interest on new capital was of particular importance both for industry and agriculture, culminated in March 1935 with the setting up of a Central Bank.

The reorganisation of trading relations through control of the exchanges was reinforced in April 1935 by a new measure imposing an additional surcharge on all imports not covered by prior permits, which thus, in most cases, affected those imports from countries with which there was an unfavourable balance of trade. The policy of equilibrating trade with industrial countries began indeed to have effect chiefly in 1935. Outstanding among the changes in Argentine trade was the conversion of an adverse visible balance with the United States in 1934 amounting to 67 million pesos to a favourable balance in 1935 of 27.8 millions. In 1933 the most important countries with which Argentina had an adverse trade balance were Germany, Spain, Italy, Japan Brazil and the United States. In 1935 the trade balance with all these except Japan and Spain had become positive, whilst the adverse Spanish balance was much reduced. We have already seen the extent to which the total favourable balance increased.

V. — CONCLUSIONS.

These last two years thus saw a distinct revival in Argentine agriculture and trade, a revival which did not fail to spread to all other spheres of economic activity. The position of the farmer in general had undoubtedly improved, except for relatively isolated cases, for as we have seen the prices of his products were rising whilst costs were falling, and at the same time yields improved. Nevertheless it was not to be expected that the pre-crisis situation would so quickly be reached. The losses of four years of crisis could not be compensated for by the gains of two or even three years. In 1935-36 short wheat and linseed crops, less than compensated by an increased maize crop did not have indeed as serious consequences as they would have had formerly. The improvement in the price situation was such that in December 1935 the Government was able partially to compensate farmers for the losses of crops by raising the minimum prices of wheat and linseed above world prices to 10 pesos and 14 pesos per quintal respectively, which it would hardly have been able to do if the recovery of the preceding two years had not taken place. This recovery enabled the Argentine to withstand the shock of the short crops of 1935-36 but could not remove all traces of the crisis.

(1) ECONOMIC CONDITIONS IN THE ARGENTINE REPUBLIC. April 1936. Department of Overseas Trade. London, 1936, p. 5.

An indication of this is the prorogation for two years towards the end of 1936 of the three year mortgage moratorium promulgated on 28 September 1933.

Recapitulating the main lines of our study it may be said that the Argentine crisis was particularly severe in the first instance as a result of the coincidence of very short crops and catastrophically low prices. The crisis lasted particularly long since the main commodities on the export of which to the world market the Argentine depends were precisely those which were subject to the severest restrictions on the import markets. The crisis affected all branches of the economy, reducing farmers' income and increasing farm debts, upsetting the balance of payments and putting public finance into a precarious position. The organisation of recovery proceeded through the reduction of costs, the organisation of marketing and the stimulation of new products in the internal sphere, the devaluation of the currency and the resultant control of the grain markets and trade balance in the external sphere. The recovery itself was materially assisted by the disappearance of that original overproduction in cereals to which the world agricultural crisis is usually attributed, as a result of drought and crop failures in many parts of the world in 1934 and 1935; and—what is a better augury for the future—by the increasing purchasing power of the world as a result of the industrial recovery in progress almost since 1932.

The essential bases of the Argentine economy have not, in spite of the changes in internal economic organisation, changed during the last seven years. Argentina still depends on the export on the world market of cereals and livestock produce, in exchange for manufactured goods. Imports of many classes of these latter have indeed fallen off very much during the crisis. The complementary character of the Argentine economy to the industrial countries of the Northern Hemisphere ensures that a full recovery in that country can only be of benefit to the rest of the world. Here however—as in the case of so many other countries in the economically small world of the twentieth century—this recovery awaits the revival of international trade. And that will hardly come of its own accord.

A. EMANUELI.

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BORRONI Prof. Ugo. *Il Commercio del Cotone - I Cotoni Americani*. Milano, Ed. Dr. A. Giuffrè, 1936-XIV, pp. XXXIV-291. Lit. 30.

[After a short introduction giving the general economic and technical aspects of cotton, an examination follows in Chapter I of the crop as a factor in agricultural activity in the United States and the fundamental characteristics of the Cotton Belt are set out. The importance of the local markets and the place of credits and of financing in cotton transactions is explained in detail by the author in Chapter II. In the third and last chapter the organisation of the cotton export is examined, futures

trading is analysed with sufficient clearness and there is finally a note on the co-operative system of cotton marketing. The material dealt with is handled systematically and a very comprehensive bibliography is added].

M. T.

LE COMMERCE INTERNATIONAL DE CERTAINES MATIÈRES PREMIÈRES ET DENRÉES ALIMENTAIRES PAR PAYS D'ORIGINE ET DE CONSOMMATION EN 1935. — Service d'études économiques de la Société des Nations, Genève, 1936.

[This volume represents a first effort to do away with the differences that exist between the trade statistics of different countries, and, more particularly, between statistics computed in different ways to register the origin and destination of merchandise.

The Committee of expert statisticians set up in virtue of art. 8 of the international Convention relating to Economic Statistics of 1928 took the view that a complete and exact review of the destinations of goods exported by each country could only be obtained through an improvement in import statistics. For this purpose all countries would have to adopt in their trade statistics the following definition of country of origin, recommended by the international Convention. "The expression country of *origin* or *production* shall mean, in the case of natural products, the country where the goods were produced, and, in the case of manufactured goods, the country where they were transformed into the condition in which they were introduced into the country of import, it being understood that re-packing, sorting and blending do not constitute transformation."

As a first step, the Committee has thought it "useful that governments which do not at present register their imports by country of origin adopt this procedure for at least 35 articles, principally raw materials and foodstuffs," which it has selected and defined. The Council of the League of Nations has made a recommendation to the Governments in this sense and has authorised the Secretariat to collect, group and publish the data in question.

In the volume which has just appeared it has been possible to make use of the questionnaires for 1935 which have been filled in by the governments of 28 countries; the data thus obtained have been completed by additional data drawn from the ordinary trade statistics of 11 countries which register imports by country of origin and in part, by data of 4 countries which register the country of consignment.

It has of course not been possible in the first years to obtain in every case a definition of the country of origin. Though the data on the basis of which the volume has been compiled are far from being perfect, the tables already provide a good indication of the movement of goods between producing and consuming countries.

At the same time they provide a valuable basis for the future improvement of trade statistics, since this first attempt brings out clearly the fairly numerous and often serious divergences which still have to be eliminated].

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No. 5

THE SOCIAL INCOME AND THE VARIATIONS FROM 1931-32 TO 1932-33 OF THE SOCIAL INCOME ON FARMS ENGAGED MAINLY IN LIVE STOCK PRODUCTION IN CERTAIN EUROPEAN COUNTRIES: SCOTLAND, NETHERLANDS, SWITZERLAND, GERMANY, AUSTRIA, DENMARK, NORWAY, SWEDEN AND FINLAND.

SUMMARY: Importance of the social income. — Table of the variations from 1931-32 to 1932-33 of the social income, the gross return and farming expenses of the farms mainly engaged in live stock production in a part of Europe. — Social income in 1932-33 in Scotland, Netherlands (Overijssel), in Switzerland, in Germany, in Austria, in Denmark, in Norway, in Sweden and in Finland on the group of farms mainly engaged in live stock production. — Variations, from 1931-32 to 1932-33, of the social income on these farms. — Causes of these variations. — Conclusion.

In the Report of Dr. R. L. Fensch on the Social Income in Agriculture (1) the following remarks occur: "Up to the present, the social income has been little used for measuring the return or the productivity of individual farms or of groups of farms. The reason is that, in an epoch of individualistic view of the world and of economy, the whole was not seen, only the individual. Everything was referred to the farmer himself; to judge of the success of the undertaking, use was made of the net return, or the effective interest on the capital." The net return represents a part only of the income from the farm, while the social income covers the whole. The farm undertaking does not only reward the employment of capital: it also yields an income which is used to pay the employees, the creditors, the State as tax collector. In other words, the farmer benefits by a part only of the total income of his farm; the other part falls into the hands of third parties. In economic science, this total income of the farm, or this sum of incomes, has received the name of the *social income*. It is obtained by deducting from the gross return the working expenses proper, *i. e.*, the farming expenses, excluding the costs of labour and the taxes. What remains is the compensation which the operator receives for the employment of the labour and capital necessitated by the farming of his land, as for the services rendered to him by public institutions. A part of this income, larger or smaller according to the conditions in which he has worked and the size of the farm, remains within the hands of the farmer: this is called operator's income or family farm income. The farmer is only anxious to know what fraction of the social income he can consume for his own use without encroaching on his own family capital, leaving all capital untouched.

(1) FENSCH, Dr. H. L. Das volkswirtschaftliche Einkommen aus der Landwirtschaft, Berlin, 1936. (Introduction *passim*).

TABLE I. — *Social Income, Gross Return and Farming Expenses in 1932-33 of the*
(The social income

DESIGNATION	Number of farms	Average area ha.	Live stock production				Crop produc- tion	Miscel- laneous branches	
			Cattle		Pigs	Other animals			
			Breeding stock; slaughter stock, etc.	Milk and milk products					
									1	2	3	4	5	6
DAIRY FARMS.									
Scotland:									
North-east and South- west	1931-32	60	77.66	14.62	173.51	29.35	9.06	29.27	4.42
	1932-33	73	104 —	10.09	127.23	25.96	8.71	21.09	6.09
Netherlands:									
Overijssel: grazing dis- tricts	1931-32	173	18.90	—	52 —	10.37	2.57	2.64	—
	1932-33	190	18.94	9.43	45.94	11.07	2.37	2.54	—
Overijssel: Ijsselstreek	1931-32	34	17.73	2.13	35.55	16.73	10.39	10.65	—
	1932-33	45	17.22	8.63	33.01	26.07	8.32	9.39	—
Overijssel: sandy dis- tricts	1931-32	215	14 —	3.27	54.64	24.92	14.31	4.29	—
	1932-33	252	13.90	4.18	46.69	27.62	11.65	3.35	—
Switzerland:									
Dairy Farms	1931-32	223	13.55	26.06	68.92	10.15	4.39	26.44	16.42
	1932-33	214	13.67	16.92	67.04	7.77	4.14	25.31	13.41
Exclusively grass . . .	1931-32	112	11.50	32.91	62.33	12.46	4.74	29.67	18.45
	1932-33	132	11.14	23.68	60.34	13.59	4.24	28.30	15.58
Growing forage mix- tures	1931-32	154	18.40	29.38	54.06	17.44	7.78	29.24	17.71
	1932-33	166	19.23	19.58	49.37	14.49	6.9	34.07	13.68
Germany:									
Bavaria (2): 5 to 20 ha.	1931-32	40	14 —	23.11	67.65	7.14	3.78	9.24	45.80
	1932-33	37	14 —	25.63	64.29	8.40	2.52	9.66	41.60
West and South: 5 to 20 ha.	1931-32	402	13 —	18.81	19.43	15.36	5.96	21.94	43.26
	1932-33	414	13 —	15.05	18.18	14.42	5.33	22.57	44.20
West and South: 20 to 100 ha.	1931-32	733	43 —	18.18	24.51	17.39	5.53	33.99	32.02
	1932-33	780	43 —	14.23	22.92	17 —	4.74	35.18	32.41
West and South: over 100 ha.	1931-32	109	223 —	12.50	33.59	9.76	4.30	49.61	23.05
	1932-33	82	194 —	9.76	29.30	13.28	3.12	55.08	23.44
East: 5 to 50 ha. . .	1931-32	221	32 —	15.81	28.84	17.21	2.79	26.04	45.12
	1932-33	259	30 —	11.16	23.26	17.67	2.33	25.58	47.44
East: 50 to 200 ha. .	1931-32	259	98 —	15.79	29.82	12.28	3.51	39.18	38.60
	1932-33	283	99 —	13.45	26.90	11.69	2.34	43.86	36.26
East: over 200 ha. .	1931-32	174	428 —	11.05	20.35	9.30	6.40	53.49	34.88
	1932-33	183	432 —	9.88	18.60	10.47	4.07	60.47	34.88

(1) The social income of 1929-30 is equal to 100. — (2) The social income of 1930-31 is equal to 100. —

Farms of a Number of European Countries Engaged mainly in Live Stock Production.
of 1928-29 = 100)

Total gross return	Farming expenses		Social income								Social income 1928-29 in national money
	Seeds, fertiliser, forage	Other expenses	Social income (total)	Income passing to third parties				Operator's income			
				Taxes	Interest on debts	Wages of employees	Total	Work of the family	Return on own capital	Total	
7	8	9	10	11	12	13	14	15	16	17	18
260.23	87.98	41.37	130.88	1.31	—	57.04	—	6.74 ³⁾	65.79	—	(¹)8,385)
199.17	61.78	34.78	102.61	1.04	—	48.72	—	6.74 ³⁾	46.11	—	—
67.58	31.60	10.09	25.89	3.40	4.60	17.83	25.83	29.41	29.35	0.06	¹ (238.15)
62.35	22.90	8.37	31.09	3.54	4.46	15.88	23.88	31.36	24.15	7.21	—
75.45	33.50	16.18	25.77	3.38	5.08	24.57	33.03	25.35	32.61	7.26	¹ (225.35)
85.42	30.06	11.13	44.23	3.47	5.24	23.01	31.72	26.91	14.40	12.51	—
101.43	56.38	18.96	26.09	1.39	3.67	20.53	25.59	41.48	40.98	0.50	¹ (253.99)
93.49	46.34	11.46	35.69	1.32	3.74	19.01	24.07	43	31.38	11.62	—
152.38	21.56	44.86	85.96	3.26	55.51	—	58.77	—	—	27.19	(798)
134.59	19.55	50.75	64.29	3.26	51.38	—	54.64	—	—	9.65	—
160.56	25.80	46.75	88.01	3.36	60.09	—	63.45	—	—	24.56	(802.18)
145.73	25.80	52.86	67.07	3.12	52.48	—	55.60	—	—	11.47	—
155.61	27.10	43.73	84.78	3.35	57.55	—	60.90	—	—	23.88	(745.47)
138.17	24.15	48.42	65.60	3.49	52.32	—	55.81	—	—	9.79	—
156.72	20.59	59.24	76.89	5.04	22.27	32.35	59.66	62.18	44.95	17.23	(²) (238)
152.10	19.33	54.62	78.15	5.46	17.65	29.83	52.94	65.97	40.76	25.21	—
124.76	17.56	42	65.20	5.33	11.91	17.87	35.11	58.93	28.84	30.09	(319)
119.75	15.67	34.49	69.59	5.64	10.66	14.11	30.41	58.62	19.44	39.18	—
131.62	24.90	41.50	65.22	7.51	14.23	39.92	61.66	26.09	22.53	3.56	(253)
126.48	22.92	35.97	67.59	7.12	12.25	35.57	54.94	25.30	12.65	12.65	—
132.81	26.17	39.84	66.80	8.60	21.48	56.25	86.33	7.03	26.56	19.53	(256)
133.98	27.34	37.50	69.14	7.42	14.84	49.61	71.87	7.42	10.15	2.73	—
135.81	16.28	37.21	82.32	6.51	18.60	34.42	59.53	38.14	15.35	22.79	(215)
127.44	14.88	33.03	79.53	6.05	17.67	30.70	54.42	39.53	14.42	25.11	—
139.18	18.71	40.36	80.11	6.43	25.15	56.72	88.30	14.0	22.22	8.19	(171)
134.50	20.47	37.42	76.61	6.43	21.06	52.63	80.12	14.62	18.13	3.51	—
135.47	21.51	38.38	75.58	8.14	29.07	69.77	106.98	5.23	36.63	31.40	(172)
138.37	25	38.37	75	6.40	24.42	63.95	94.77	4.65	24.42	19.77	—

(3) Net return.

DESIGNATION	Number of farms	Average area ha.	Live stock production				Crop produc- tion	Miscel- laneous branches	
			Cattle		Pigs	Other animals			
			Breeding stock, slaughter stock, etc.	Milk and milk products					
			1	2	3	4	5	6	
Austria:									
Dairy farms without alpine pasture	1931-32	34	21.74	12.84	81.40	25.43	4.19	15.54	32.75
	1932-33	29	29.43	23.60	60.44	22.18	5.66	18.25	23.44
Dairy farms with alp- ine pasture	1931-32	117	33.86	16 —	40.02	20.44	4.41	15.10	28.40
	1932-33	105	38.73	17.51	30.24	16.48	6.12	12.42	18.90
Denmark:									
under 10 ha.	1931-32	139	6 —	4.91	54.36	45.01	17.91	4.59	9.19
	1932-33	133	6.30	4.12	43.26	52.30	10.48	5.39	7.76
from 10 to 20 ha.	1931-32	82	15.39	7.41	53.47	39.35	10.42	7.17	7.18
	1932-33	83	15.40	6.25	40.30	53.47	10.19	9.49	6.94
from 20 to 30 ha.	1931-32	106	24.90	7.98	50.47	46.01	7.04	8.69	5.63
	1932-33	112	24.60	5.87	40.84	59.39	8.21	10.80	5.64
from 30 to 50 ha.	1931-32	145	38.90	7.31	48.56	42.50	7.31	7.31	5.75
	1932-33	161	39.20	5.74	42.30	53.79	7.57	8.88	4.96
from 50 to 100 ha.	1931-32	83	65.40	6.07	47.69	37.86	6.07	13.01	4.91
	1932-33	76	65.20	4.62	39.60	47.98	6.65	17.63	5.20
over 100 ha.	1931-32	47	205 —	5.61	47.04	23.05	1.56	37.07	4.98
	1932-33	48	198.90	3.43	42.68	30.84	1.56	35.20	4.36
DAIRY FARMS WITH PIG FATTENING.									
Norway:									
Oestlandet	1931-32	115	22.02	13.77	67.25	17.76	13.21	24.59	15.63
	1932-33	99	23.60	12.46	62.09	17.82	11.57	31.89	15.15
Trondelag	1931-32	34	15.62	15.82	51.98	11.57	12.50	26.75	20.27
	1932-33	32	16.39	14.22	48.29	12.93	14.03	32.57	18.58
Sörlandet	1931-32	31	5.73	14.03	56.48	17.15	25 —	25.17	20.40
	1932-33	28	5.80	10.57	53.97	15.86	23.19	26.22	19.18
Vestlandet	1931-32	12	7.47	12.40	62.33	20.49	36.10	39.47	25.27
	1932-33	13	7.51	15.01	51.67	18.15	37.97	33.22	22.36
Sweden:									
Upper Norrland	1931-32	104	9.67	7.81	71.07	10.13	15.60	14.04	18.82
	1932-33	94	9.02	6.52	68.12	9.73	15.59	12.17	20.23
Lower Norrland	1931-32	61	10.28	8.56	59.02	12.33	18.40	13.65	15.71
	1932-33	56	10.43	5.49	54.89	12.70	15.34	13.39	14.03
Finland:									
under 10 ha.	1931-32	161	9.06	4.12	44.79	7.91	17.43	24.06	11.48
	1932-33	155	8.76	4.25	41.77	9.06	21.59	27.22	10.89
from 10 to 25 ha.	1931-32	344	19.69	4.65	47.36	9.53	10.26	23.88	9.70
	1932-33	364	19.58	4.60	44.62	9.92	12.61	28.20	9.30
from 25 to 50 ha.	1931-32	172	38.56	5.12	55.98	10.24	10.11	32.31	9.77
	1932-33	170	38.89	4.45	51.19	11.24	11.24	36.77	9.31
over 50 ha.	1931-32	93	87.62	4.54	68.30	11.76	11.46	34 —	10.19
	1932-33	94	86.59	4.54	61.09	12.80	13.76	42.26	9.60

(1) Net return. — (2) Taxable net return.

Total gross return	Farming expenses		Social income								Social income 1928-29 in na- tional money
	Seeds, fertiliser, forage	Other expenses	Social income (total)	Income passing to third parties				Operator's income			
				Taxes	Interest on debts	Wages of employ- ees	Total	Work of the family	Return on own capital	Total	
7	8	9	10	11	12	13	14	15	16	17	18
172.15	29.32	55.94	86.89	8.34	8.78	34.85	51.97	64.42	29.50	34.92	(237.24)
153.57	18.15	38.26	97.16	8.61	7.78	31.56	47.95	47.62	1.59	49.21	—
124.37	15.79	42.04	66.54	4.85	7.06	35.29	47.20	49.2	29.91	19.34	(221.31)
101.67	9.27	26.97	65.43	4.54	5.96	26.40	36.90	38.83	10.30	28.53	—
135.97	61.49	18.54	55.94	4.12	—	8.24	12.36	46.91	3.33	43.58	(631)
129.31	48.97	16.32	64.02	3.17	—	8.87	12.04	43.58	8.40	51.98	—
125 —	52.78	21.07	51.15	5.09	—	21.06	26.15	30.09	5.09	25 —	(432)
132.64	42.82	19.91	60.91	4.17	—	20.60	24.77	29.40	15.74	45.14	—
125.82	53.29	10.01	53.52	6.10	—	25.82	31.92	22.07	0.47	21.60	(426)
130.75	45.31	18.07	67.37	4.46	—	23.94	28.40	22.07	16.90	38.97	—
118.80	48.83	19.06	50.91	5.74	—	27.94	33.68	19.06	1.83	17.23	(383)
123.24	40.73	17.76	64.75	4.44	—	26.37	30.81	18.01	15.93	33.94	—
115.61	42.49	19.05	53.47	6.36	—	32.68	38.44	15.90	0.87	15.03	(346)
121.68	36.13	19.37	66.18	5.20	—	30.06	35.26	14.74	16.18	30.92	—
119.31	38.94	23.36	57.01	7.79	—	44.24	52.03	8.10	3.12	4.98	(321)
118.07	31.78	21.50	64.79	5.92	—	39.56	45.48	7.16	12.15	19.31	—
152.21	37.25	42.38	72.58	1.17	—	39.41	40.58	24.76 (1)	7.24	32 —	(360.30)
150.98	32.78	39.44	78.76	1.11	—	37.66	38.77	22.87 (1)	17.12	39.99	—
138.89	23.13	42.37	73.39	1.06	—	28.52	29.58	38.29 (1)	5.52	43.81	(300.89)
140.62	20.57	39.75	80.30	1.16	—	28.02	29.18	35.10	16.02	51.12	—
158.23	35.74	46.79	75.70	1.22	—	40.25	41.47	37.98 (1)	3.75	34.23	(473.99)
148.99	32.70	43.91	72.38	1.18	—	36.90	38.08	36.37 (1)	2.07	34.30	—
196.06	35.93	48.50	111.63	1.47	—	39.04	40.51	69.42 (1)	1.70	71.12	(299.20)
178.38	31.58	43.65	103.15	1.24	—	34.29	35.53	71.86 (1)	4.24	67.62	—
137.47	21.80	31.02	84.65	—	—	10.29	—	72.39	—	(2) 1.97	(217)
132.36	20.51	31.77	80.08	—	—	6.96	—	79.66	—	(2) 6.54	—
127.67	18.87	28.10	80.70	—	—	21.65	—	52.41	—	(2) 6.64	(265.62)
115.84	17.10	28.62	70.12	—	—	17.62	—	51.69	—	(2) 0.80	—
109.79	17.29	21.87	70.63	0.78	6.82	12.17	19.77	45.01	5.85	50.86	(2,186)
114.78	19.99	21.50	73.29	0.73	6.96	11.48	19.17	43.73	10.39	54.12	—
105.38	14.57	21.13	69.68	1.18	7.63	19.95	28.76	34.64	6.28	40.92	(1,784)
109.25	14.97	21.02	73.26	1.12	7.46	18.83	27.41	33.24	12.61	45.85	—
123.53	17.69	25.26	80.58	1.80	9.97	33.64	45.41	22.47	12.70	35.17	(1,504)
124.20	17.69	23.40	83.11	1.73	9.64	31.65	43.02	21.41	18.68	40.09	—
140.25	25.15	31.10	84 —	2.38	13.47	49.11	64.96	9.45	9.59	19.04	(1,344)
144.05	25.37	29.47	89.21	2.60	13.62	47.92	64.14	9.30	15.77	25.07	—

"But the economist," to quote Dr. Fensch again, "is mainly concerned to know the extent and the composition of this total income; the former units of measurement (net return, etc.) are not enough for him. The social income is especially useful for making comparisons. But although it increasingly tends to occupy a position of first rank, this does not imply that the other units of measurement must disappear. Their utility depends on the angle from which the question is approached."

It is proposed to include in the *Monthly Bulletin of Agricultural Economics and Sociology* this year a series of articles on the social income in 1932-33 and in 1933-34 in the European countries which supply accountancy results to the Institute. The year 1932-33 will first be studied; then the year 1933-34.

In this first article, the variations of the social income from 1931-32 to 1932-33 will be studied on the farms mainly engaged in live stock production in the countries already enumerated.

Since it was in 1928-29 that the social income reached the highest level, there has been used as basis of calculations the social income obtained by each group of farms in that year; this has been taken as 100 and the index numbers calculated which are shown in Table I.

In this way it will be seen *how* and *why* the social income has varied in each country from 1931-32 to 1932-33. The results of each group during two successive years will be compared and a measure of comparison will be employed which is beyond challenge, since it is based not on *absolute values* but on *relative* figures, and since, on the other hand, the results of one country are not compared with those of another; all that is done is to compare *between themselves* the results obtained by the farms of one and the same country. It will be seen what are the reasons for the increase or diminution of the social income in each of the groups of farms studied, and without attempting to make an international comparison which may be open to question, a *general view* will be obtained of live stock production in a part of Europe.

A. In Scotland.

Dairy Farms of the North-east and South-west. — Weather conditions were in general good. Cereals, root crops, herbaceous crops gave higher yields than in 1931 and higher than normal. Hay crops were somewhat less good, and as the areas under grass remained the same, there was some reduction in forage supplies in the South-west.

Dairy production was much lower than in the previous year. Although there was a slight increase in cattle numbers, the increase in sales is apparent only, since this fact is connected with the increase in average area under cultivation *viz.*, from 77.66 to 104 ha.

	1931-32	1932-33
Cattle, head	0.14	0.40
Pigs, head	0.18	0.36
Milk and milk products, kg.	1,413 —	847 —

Among prices of animal products, the prices of fat cattle and cattle for fattening, of cheese and butter were those that showed the most marked declines.

(1911-13 = 100).

The decrease in expenses under heading: farming expenses could not make up for the decrease in gross return. *The social income was lower by 28 per cent.*

With prices kept up by the State and with direct assistance to farmers, gross returns were larger. Costs were reduced. The reduction of the expenditure on purchases of fertilisers and feeds was in part due to the more systematic utilisation and lower consumption of these products; in part also to the fall of prices. Building materials were cheaper. Price index-numbers were as follows:

The advance in the gross return of the IJsselstreek farms was due to the increase in pig and cattle production. In the grazing and in the sandy districts, the larger pig production prevented the fall of the gross return. The following statement gives the live stock production per hectare of Overijssel in 1932-33:

	Cattle (kg. of live weight)		Milk (kg.)		Pigs (kg. of live weight)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Grazing districts	—	1.70	2,403	2,205	70	87
Ijsselstreek	12.50	32 —	1,555	1,490	107	194
Sandy districts	21.70	17 —	2,094	2,390	180	232

Cereal production shows a slight decrease, and the rise in the wheat prices was not enough to compensate for the reduction in area sown. Potato growing became less remunerative owing to over-production of potato flour. Such is the explanation of the lower gross return from crop production.

Of much more importance is the dairy production, which was lower than in 1931-32. The decline in the export of dairy products was largely due to the difficulties encountered: export of butter and cheese fell by 38 and 10 per cent. respectively; prices of butter declined by 29 per cent. and cheese prices by 23 per cent.

Breeding of cattle and fattening of pigs however proved remunerative.

Briefly it may be stated that *the gross return on the whole maintained its position; that there was a marked reduction of farming expenses; that the social income in 1932-33 was greatly higher than in the previous year.* Moreover, agricultural wages were lower and the operator's share in the social income has much increased.

In all the other provinces of the Netherlands, the profitability was also much more satisfactory than in 1931-32. Except in Utrecht, the net return from being negative became positive:

Net Return in Florins per Hectare (1).

	1931-32	1932-33
Groningen	16.41	36.80
Frisia	15.86	24.49
Drenthe	14.01	30.82
Guelder	84.39	11.89
Utrecht	137.20	— 9.70
North Holland	2.91	25.42
South Holland	10.73	29.68
Zeeland	24.59	39.23
Northern Brabant	41.15	9.67
Limburg	3.73	28.65

C. In Switzerland.

Prices of agricultural products fell, especially the prices of slaughter animals. The market for fat pigs was congested by the exceptionally abundant supply. Milk deliveries and the production of slaughter animals considerably increased. The larger dairy production was due to the increase in the number of dairy cows as well as to a falling off in breeding. There was some reduction in pig numbers after 1931, but the outturn of bacon and of pigmeat was in advance of the national requirements. Exports declined by 38 per cent. Imports of farm requisites rose from 22,833,000 quintals in 1931 to 21,827,000 quintals in 1932. Larger quantities were imported of oats, wine, grapes, poultry, eggs, wool, vegetables and honey.

(1) Kind of free income.

Prices were as follows:

	in 1931-32	in 1932-33
Wheat, per quintal	39.43 fr.	37.18 fr.
Table potatoes, per quintal	11.64 "	10.29 "
Fat calves and oxen, per 100 kg. live weight	176.70 "	150.30 "
Fat pigs	174 — "	127 — "
Fresh eggs, per 100	16.73 "	13.99 "
Fluid milk, per 100 kg.	23.60 "	21.50 "
Butter, per kg.	4.57 "	4.34 "
Emmental, per kg.	2.28 "	2.06 "

Except in the case of fruit trees and potatoes, crop yields were higher:

Returns in Kind in Thousands of Quintals.

	1931-32	1932-33
Cereals	2,336	2,355
Potatoes	7,500	6,549
Fruits	7,980	5,285
Milk	20,000	27,795
Cheese	510	497
Butter	160	229
Home-bred slaughtered stock (thousands)	1,329	1,534
Pigmeat	1,768	1,960
Eggs (millions)	370	423

For the three groups of farms under survey, the gross return in quantities of animal production may be stated as follows:

	Cattle (kg. of live weight)		Milk (kg.)		Pigs (kg. of live weight)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Dairy farms	117	90	2,391	2,488	46	49
Farms exclusively grass	149	127	2,174	2,251	57	86
Farms growing forage mixed crops	124	97	1,752	1,712	75	85

On the farms growing mixed forage crops there was a tendency to diminish milk production so as to give more importance to cereal growing. This could not be done with the other two groups where the crop rotation was not fully perfected.

The results of farms growing mixed forage crops and especially of the dairy farms were unfavourably affected by the poor conditions attending the stock breeding and pig fattening.

The working expenses, already very high, became still higher,

The gross return of the exclusively grass farms did not perceptibly decline, but the farming expenses increased. The position thus became worse, in spite of good harvests. The gulf which separates prices of agricultural products from those of farm requisites was widened to the detriment of the family farmer.

The social income of the three groups fell in the same proportion, as also the operator's return, the share of the social income passing to third parties (taxes, interest on debts, wages of farm workers) showing a much less considerable decrease than the return on own capital.

D. In Germany.

The intention of the Government was to close the German market to foreign cereals, and to have larger quantities of home-grown cereals used as stock feeds. The proportion of national flour to be used for breadmaking was fixed at 97 per cent. A decline in cereal prices could not however be checked by any of the measures taken.

Stock breeding and forage growing being in an unsatisfactory condition owing to their long neglect, the area under cereals was very considerably extended and production substantially increased.

On 15 November 1932, the yearly imports of butter into Germany were reduced to a quota of 55,000 metric tons subject to a uniform customs charge of 75 RM. per quintal. Butter prices however declined owing to the glutting of the market, the diminished purchasing capacity and especially the competition of fats and oils. Two decrees were promulgated by the President of the Reich: the first, on 23 December 1932, authorised the Government to compel the margarine factories situated within the customs cordon to mix with the margarine a certain quantity of butter, suet and rendered fat; to make provision for the incorporation of a corresponding quantity of the same products in imported margarine; to limit the industrial manufacture of margarine. The second decree, on 23 March 1932, set up a monopoly of artificial alimentary fats and of margarine, reduced by 40 per cent. the production of margarine, and established a consumers' tax on margarine of 0.5 RM. per kg. On 4 April 1933 the Office of the Reich for Oils and Fats was constituted.

Duties on live animals, meat, bacon, cheese, condensed milk, eggs were increased. The Government ordered that motor-spirit should contain 10 per cent. of alcohol in place of 6.

The prices of agricultural products in RM. the quintal were as follows:

	1931-32	1932-33
Wheat (Berlin)	23.64	20.03
Rye (Berlin)	19.02	15.77
Fodder barley (Berlin)	16.35	16.57
Oats (Berlin)	15.07	13.25
Red potatoes (Berlin)	3.57	2.67
Fluid milk (Berlin)	15.06	13.84
Butter (Hamburg)	245.35	212.92
Oxen, live weight (Berlin)	76.06	64.42
Pigs (from 100 to 120 kg. live weight) (Berlin)	87.75	77.40

Prices of farm requisites did not fall in the same proportion as the prices of agricultural products. The following is the ratio between the two groups of prices, prices of industrial products being equal to 100.

$$1931-32 = 90.4$$

$$1932-33 = 87.8$$

Herd increase of cattle was smaller and milk production lower especially on the farms of the East and on those of the West and South of over 100 hectares.

On the other hand, pig production and crop production increased especially on the farms of the West and South of over 100 hectares and on those of the East of over 200 hectares.

Gross Return in Quantities per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)		Cereals (quintals)		Potatoes (quintals)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
(a) Farms deriving profit mainly from live stock yield:										
West and South:										
5 to 20 ha. . .	79	74	418	419	56	59	2.40	2.80	2.80	3.75
20 to 100 ha. . .	61	56	418	419	50	55	3.42	4.27	2.52	3 —
over 100 ha. . .	42	39	580	542	28	44	5.32	7.13	2.24	2.62
East:										
5 to 50 ha. . .	45	37	418	361	42	49	2.36	2.68	1.40	1.50
50 to 200 ha. . .	35	36	344	332	24	26	3.05	3.66	1.12	1.50
over 200 ha. . .	25	26	236	231	18	23	3.78	4.94	2.52	3.75

The farms of the West and South of over 100 ha. and those of the East of over 200 ha. are the only farms which in 1932-33 gave a gross return higher than in 1931-32; this plus value was due to the very marked increase in pig and in crop production.

The working expenses were reduced proportionately more than the gross return on the farms of Bavaria, of the West and South of 5 to 20 ha. and of 20 to 100 ha. These expenses were increased on the farms of the East of 50 to 200 ha. and over 200 ha. On the farms of the East of 5 to 50 ha., the decrease in the gross return was more marked than in the working expenses. The result was as follows: *the social income advanced on the farms of Bavaria, of the West and South; it declined on the farms of the East.*

In all the regions and on all groups of farms, the interest charges on debts and the workers' wages stood at a lower level than in 1931; the share of the social income remaining in the hand of the operator is larger.

E. In Austria:

Prices of cereals, beef and pork advanced:

	Prices in schillings	
	1931-32	1932-33
Wheat	25.39	33.57
Rye	25.85	29.25
Barley	33.17	33.62
Oats	25.63	24.11
Potatoes	14.48	13.29
Beef	2.38	2.48
Pork	2.22	2.32
Milk	0.34	0.33
Butter	4.11	4.08

Herd increase of cattle was larger than in 1931-32; on the other hand pig production and dairy production were lower.

Gross Quantitative Return per Hectare.

	Cattle (kg. live weight)		Milk (kg)		Pigs (kg. live weight)		Cereals (quintals)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Dairy farms without alpine pasture	13	23	568	434	41	23	0.52	0.47
Dairy farms with alpine pasture	15	16	261	203	30	16	0.39	0.42

Owing to the rise in meat prices, cattle breeding gave a gross return higher than that of 1931-32, but the total gross return, in consequence of the decrease in gross return from milk and pig fattening, is lower than in the previous year.

The working expenses decreased to an extent sufficient to maintain the social income of the dairy farms with alpine pasture at the level of that of 1931-32 and to cause an increase of the social income of the dairy farms without alpine pasture. The interest on debts and labour costs were lower; the return on the own capital was larger; the share of the social income remaining in the hands of the operator was also larger.

F. In Denmark:

The harvests were more abundant than in 1931-32.

Production in Quintals per Hectare.

	1931-32	1932-33
Cereals	24.1	26.3
Sugar beets	250.0	377.0
Podder beets	509.0	633.0
Potatoes	138.0	178.0

Butter exports fell from 166,000 tons in 1931 to 152,000 in 1932; those of bacon from 394,000 to 345,000 tons; egg exports from 57 to 54 million score and those of cattle from 202,000 to 127,000 head.

The variations in the price index-numbers of agricultural and industrial products were as follows (1909-14 = 100):

	1931-32	1932-33
Live stock products	77	80
Crop products	99	87
Agricultural products	79	81
Stock feeds	83	91
Fertilisers	81	87
Building materials	177	163
Equipment	148	152
Wages (1910-15 = 100)	168	154

Prices of cereals dropped from 12.6 crowns per quintal in 1931-32 to 11.60 in 1932-33; prices of potatoes from 10.74 to 7.47; beetroot prices rose from 1.56 to 2.11; those of milk fell from 10.04 to 9.10; those of butter from 193 to 168; bacon prices rose from 72 to 98 and beef prices fell from 52 to 39.

The gross quantitative return of cattle breeding, of dairying, of pig fattening (except on the farms of 10 to 20 and of over 100 ha., where the gross quantitative return on pig keeping is higher) was lower in 1932-33 than in 1931-32. Gross return in quintals of crops was usually higher than that in 1931-32.

Gross Quantitative Return per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)		Cereals (quintals)		Potatoes (quintals)		Sugar beet (quintals)	
	1931- 1932	1932- 1933	1931- 1932	1932- 1933	1931- 1932	1932- 1933	1931- 1932	1932- 1933	1931- 1932	1932- 1933	1931- 1932	1932- 1933
Farms of under 10 ha. . .	75	67	3,547	3,000	380	350	0.15	0.26	1.06	1.20	3.20	3.80
» from 10 to 20 ha. . .	77	69	2,389	2,198	227	245	0.55	0.78	0.95	1.07	1.02	2.84
» from 20 to 30 ha. . .	82	64	2,223	1,912	262	268	0.86	1.21	0.74	0.67	4.49	6.03
» from 30 to 50 ha. . .	68	56	1,923	1,780	218	218	0.62	1.21	0.95	0.67	1.92	3.32
» from 50 to 100 ha. . .	51	41	1,706	1,505	175	176	1.64	2.41	0.53	0.40	4.49	8.06
» of over 100 ha. . .	44	28	1,561	1,505	99	105	5.39	5.09	0.64	0.40	3.85	6.63

It is thus in the first instance to the rise in the price of bacon that there is to be attributed the plus value of the gross return of pig breeding, balancing the minus value of the gross return from cattle keeping (including dairy production) the cause of which is to be found in the fall of prices: butter, 13 per cent. beef from 15 to 25 per cent. Except on the farms of over 100 ha. the gross return of the crop production was higher than in 1931-32; the harvests were good and there was a considerable advance in the prices of sugar beet.

The total gross return of farms from 10 to 20, from 30 to 50 and from 50 to 100 ha. was higher than in 1931-32; that of farms of over 100 ha. was at the same level as in 1931-32. The total gross return of farms of less than 10 ha. diminished, because the production of bacon was there less by 8 per cent. than that of 1931-32.

The reduction of working expenses was however such that the social income of all the groups of farms was higher than that of the previous year. A larger share of the social income remained in the hands of the farmer.

G. In Norway.

The customs duties on nearly all agricultural products were raised on 13 January 1932 by 20 per cent. By the Law of 15 June 1932 a loan fund was established in favour of farmers and also inspection was instituted of the quality of all agricultural products imported, exported or placed on the home market for sale.

A law of 1 January 1933 made obligatory the payment of a unification charge of 4 to 5 öre per litre on milk intended for direct consumption.

From 1931-32 to 1932-33 prices of agricultural products fell by 7 per cent.

Market Prices at Oslo, in Crowns per Kilogramme.

	in 1931-32	1932-33
Wheat	0.16	0.17
Rye	0.13	0.15
Barley	0.13	0.15
Oats	0.13	0.13
Potatoes	0.07	0.05
Beef	1.07	0.85
Bacon	0.86	0.91
Butter	2.46	2.34

	Oestlandet	Trøndelag	Sörlandet	Vestlandet
1931-32	15.3	12.5	14.3	12.0
1932-33	13.8	11.7	13.7	11.4
Diminution (%)	9.8	6.4	4.2	5.0

In all the districts, the crop yields were more than satisfactory. The hay gathered in Oestlandet and in Trøndelag was exceptional in quality, although the quantity was not considerable. Cereals in general, and barley and oats in particular, gave remunerative yields in nearly all parts of the country. The potato harvest was very abundant, and that of the fodder root crops equally so. The only region in which there were short crops was Vestlandet which suffered from drought. The gross quantitative return of crops and the dairy and pig production also showed the effects of drought.

Gross Quantitative Return per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)		Cereals (quintals)		Potatoes (quintals)	
	1931-33	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-31	1932-33
Oestlandet	93	109	1.584	1.621	110	104	2.10	3.28	4.30	6.08
Trøndelag	93	103	1.251	1.242	60	63	2.46	3.43	3.68	4.32
Sörlandet	124	122	1.872	1.867	141	122	1.63	1.79	7.80	8.84
Vestlandet	69	109	1.554	1.356	107	88	0.57	0.44	7.08	6 —

There was an increase in the gross return in crowns in Trøndelag where the farmers secured larger receipts than in 1931-32 from the sale of cereals, potatoes and pigs; it was maintained at the same level in Oestlandet where the sales of crop products were larger than in the previous year. In Sörlandet and in Vestlandet, it decreased. Since the fall in prices of chemical fertilisers, concentrated feeds and other farm requisites was less marked than that of prices of agricultural products, *the social income of the farms of Sörlandet and Vestlandet*

was lower than in 1931-32. It advanced in the regions of Oestlandet and Trondelag where the gross return showed no decline. Except in Vestlandet, the share falling to the operator increased.

H. In Sweden.

The law introducing the cereal monopoly remained in force in 1932. A law was passed by the Parliament empowering the Swedish Sugar Manufacturing Company to establish a monopoly on the import of sugar. The import duty on potatoes was fixed at one crown per quintal. The levying of general and local dues on milk and cream, introduced in 1931-32, was continued in 1932-33; this has made it possible to raise the prices of butter and cheese on the home market and to equalise the prices of fluid milk and of milk for manufacture of dairy products.

In spite of these measures, prices of all agricultural products except prices of pigs, peas and sugar beet, declined in 1932-33. Prices of hay, butter and cheese fell below the level of pre-war prices.

Prices of the Principal Agricultural Products, in Crowns per Hundred Kilogrammes.

	1931-32	1932-33
Wheat	17.90	17.55
Rye	16.20	15.90
Barley	12.45	11.05
Oats	10.80	9.45
Potatoes	9.30	6.30
Sugar beet	2.31	2.43
Butter	189.20	179 —
Cheese	115 —	79 —
Milk	21 —	20 —
Oxen	43 —	37 —
Pigs (from 75 to 100 kg.)	55 —	65 —

Weather conditions were in general favourable to the crops. In consequence of the drought during the months decisive for forage crops (May and June) the hay crops were moderately good only. All other harvests were very good.

Larger quantities of cereals were sold by the farmers than in the previous year.

Gross Quantitative Return per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)		Cereals (quintals)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Upper Norrland	39	38	743	739	40	32	0.84	0.89
Lower Norrland	53	39	755	729	60	52	0.96	1.25

The gross quantitative return in animal products was lower than in 1931-32. In view of the advance in the prices of pigs, the gross return in crowns should have advanced in 1932-33, if pig production had not declined. The total gross return in crowns, whether owing to the decrease in pig production or the fall in prices of other animal products was lower than that of 1931-32.

Prices of fertilisers and of feeds were maintained at very nearly the level of those of 1931-32; other expenses were not reduced, so that the social income followed the decline of the gross return.

I. In Finland.

With the object of keeping up the prices of dairy products on the home market, the Finnish Parliament passed in December 1932 a law establishing export premiums on butter and cheese for export.

The course of economic development tends to show that the lowest point of the depression had been reached and that the market situation was improving. Demand was on the increase and prices showed an upward tendency.

The prices of cereals, of pigmeat, eggs and potatoes advanced; prices of fluid milk fell by 6.3 per cent. and butter prices by 6.9. Prices of beef and of hay remained stationary.

Prices of Agricultural Products in Marks.

	1931-32	1932-33
Wheat	252	260
Rye	220	220
Barley	182	175
Oats	112	121
Potatoes	48	50
Milk	12.6	11.8
Butter	216	201
Cheese	153	150
Beef	50	50
Pork	76	88

The harvests were very abundant, and the quality of the hay from the sown meadowland particularly good.

There was an increase in the gross return reckoned in marks, owing to the rise in prices of pigs and of eggs, to the increased value of the egg exports which amounted to 62,600,000 marks more than in 1931, and to crop products. The sales of crop products realised more than in 1931-32, but live stock production showed a decline.

Gross Quantitative Return per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)		Cereals (quintals)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Farms under 10 ha.	18	19	777	774	34	33	1.97	2.08
» from 10 to 20 ha.	17	16	671	674	33	30	1.74	1.94
» from 25 to 50 ha.	15	13	668	652	30	29	2.16	2.27
» over 50 ha.	12	12	712	691	30	29	2.14	2.41

Dairy production was somewhat less considerable in 1932 than in 1931, as there was more difficulty in marketing Finnish butter on foreign markets: butter exports showed a shortage of 71,700,000 marks.

The working expenses hardly showed variation, so that the rise in the gross return involved that of the social income, as well as the interest on own capital. The share of the social income remaining in the hands of the operator perceptibly increased.

SUMMARY.

In 1931-32 the social income of the dairy farms amounted:

in the Netherlands (Overijssel)	to	25 per cent. of that in 1929
in Denmark	to	50-60 " " 1928
in Germany	to	65-80 " " "
in Austria	to	67-78 " " "
in Norway, Sweden and Finland	to	70-80 " " "
in Switzerland	to	85-90 " " "
in Scotland	to	130 " " 1929

From 1931 to 1932 the social income advanced in the Netherlands in Western and in Southern Germany, in Austria, in Denmark, in Norway and in Finland. This advance is due to the increase in the gross return and especially to the decrease in working expenses.

The social income was lower in 1932 than in 1931 in Scotland, where the gross return decreased further than the working expenses; in Eastern Germany where the gross return somewhat decreased and the working expenses somewhat increased; in Switzerland where the gross return showed decline and the working expenses increased; in Sweden where the gross return was lower and the working expenses remained at the level of 1931-32.

While in the larger number of the countries under survey, agriculture in 1932 met with better conditions, in Switzerland farming was much affected by the crisis, which had been delayed in action. In contrast to what occurred in the other countries, the share retained by the farmer of the social income was smaller than in 1931-32.

The next article will deal with the farms mainly engaged in crop production.

J. DESLARZES.

LIVE STOCK INSURANCE IN ITALY.

SUMMARY: Companies and societies engaged in this branch of insurance. — Origin and development of this branch of insurance. — Legal provisions applying to ordinary live stock insurance companies and societies. — Legal provisions applying to local mutual live stock insurance societies. — National Fascist Federation of Mutual Live Stock Insurance Societies. — Model rules of the mutual live stock insurance societies. — Compulsory notification in the event of death. — Live stock insurance and agricultural credit. — Statistical data.

Companies and Societies engaged in this Branch of Insurance in Italy.

In 1935 there were in operation in Italy in this branch of insurance 4 ordinary share companies and co-operative societies and 3 mutual insurance societies (1).

In addition to these undertakings there were numerous small associations, dealing with live stock insurance, purely local in character. In 1935 there were 753 societies of this type belonging to the National Fascist Federation of Agricultural Mutual Societies for Live Stock Insurance (*Federazione Nazionale Fascista delle Mutue Agrarie di Assicurazione del Bestiame*) to which reference will be made later, with 35,000 members and a total assured capital of 71,000,000 liras (2).

According to the latest Report of the President of the National Institute of Co-operation (*Ente Nazionale della Cooperazione*), published in February of this year, the number of the Mutual Societies had risen to 990.

(1) The following is the list of these Societies:

Consorzio Esercenti Macellari, Florence. Co-operative share company with unlimited capital. Company formed on 1 October 1919, authorised 28 January 1926. Share capital 15,850 liras fully paid up.

Consorzio Esercenti Macellari, Pistoia. Co-operative share company with unlimited capital. Company formed 6 January 1927, authorised 18 January 1935. Share capital 7,600 liras fully paid up.

Società Anonima Cooperativa per l'Assicurazione del Bestiame da Macello, Lucca. Formed 17 November 1930, authorised 10 August 1931. Share capital 11,000 liras (10,600 liras paid up).

Società Italiana Assicurazione Cavalli (S. I. A. C.), Milan. Ordinary share company. Share capital 1,000,000 liras (paid up 400,000 liras).

Mutua Italiana Assicurazione Bestiame (M. I. A. B.), Rome. Italian mutual live stock insurance society, formed 29 October 1925. Guarantee fund 2,250,000 liras fully paid up.

Mutua Assicurazione Bestiame da Macello, Milan. Founded in 1902. Share fund 218,973.

Mutua Assicurazioni Enti Assicurativi Italiani, Milan. Constituted 7 July 1926, authorised 12 March 1927. Guarantee fund 534,000 liras fully paid up.

(2) *Sindacato e Cooperazione*. Bulletin of Co-operative Information published by the Ministry of Corporations. Rome, 1-30 April 1936, p. 462.

Origin and Development of this Branch of Insurance in Italy.

Before the Union of the Kingdom of Italy in 1870 certain attempts were made to organize insurance against live stock mortality and certain local or regional societies were formed, but owing to defects in the system or for various other reasons they had only a brief existence.

New schemes and projects were proposed after 1870. The publication issued by the Ministry of Agriculture, bearing the title "Le società di assicurazioni alla fine del 1886," mentions two societies as concerned with this branch of insurance: The *Agraria*, a joint-stock company founded in 1881 at Turin with a capital of 200,000 liras, and the *Società fra i contadini di Galliate Novarese*, a small local union, legally constituted in 1883 as a co-operative society. There may be added to these societies *La Stella dell'Italia Agricola* (Florence) which operated hail and live stock insurance but failed in 1887, and *L'Alleanza degli Agricoltori* (Mantua), which was closed during the same year. The Ministry's publication also refers to the *Unione Umbra fra gli Agricoltori*, established in 1880 for the purposes of insurance against hail and against live stock mortality. The Society however abandoned its second branch after having extended its activities and suffered severe losses (1).

During this period a number of so-called "*vacire*" were founded in the valleys of Piedmont at Boves and Ceraglio (Cuneo) and later in a number of villages in the neighbourhood of Monza, at Cagno and at Cantù in the province of Como, and in Valtellina these societies, which were confined to family groups, became very numerous. Each member contributed an initial sum corresponding to the number of insured cattle, which were given a distinguishing mark or *contrassegno*. The funds thus provided were to be used for the first claims for indemnity; for any subsequent losses all the members were required to make an additional contribution. In Friuli during 1885 a number of mutual societies were started, as also in the Marches, in Umbria, in Tuscany, in Calabria and in Sardinia, and, at a rather later date, similar movements became general throughout Italy. Usually these societies were of a very modest order, frequently possessed no written rules and followed very different systems, especially in regard to contributions and compensation payments.

Reinsurance and the formation of federations, with a view to mutual support, were as a rule neglected by the societies so that when losses were serious all financial resources were absorbed and the payment of compensation in full made it impossible to build up any reserve fund. This is to be explained by the fact that a number of new societies were springing up while at the same time others were being closed (2).

(1) WOLLEMBORG. Sull'assicurazione in generale e in particolare sull'assicurazione contro i danni della mortalità del bestiame. Udine, 1889, p. 30.

(2) PRATO, PORRI, CARRARA. Lo sviluppo e il regime delle assicurazioni in Italia. Lattes, Turin, p. 157.

At the beginning of the twentieth century a new movement towards the development of these societies is to be observed, largely due to the propaganda work started in 1910 by the *Comitato Nazionale per la mutualità agraria*, fostered and assisted by the Ministry of Agriculture. The work of this body was mainly directed to drafting rules and regulations suitable for local mutual societies and for federated bodies, and to the spread of a knowledge of sound principles in administration and in accountancy, which are highly important for such institutions (1).

The number of mutual agricultural societies continued to increase with the corresponding growth of agricultural consortia, rural banks, co-operative dairies, and in 1913 the number of mutual insurance societies for live stock rose to 1,100. At the same time the progress of the movement clearly revealed the inadequacy of the present legislation. It was necessary to simplify procedure as regards legal constitution, to obtain fiscal facilities and rules in closer accord with the nature of these bodies, with their objects and with the purposes they were intended to serve. Before the Law of 1907 the agricultural mutual insurance societies were constituted in accordance with the provisions of the Commercial Code as co-operative societies, or in accordance with those of the Law of 1886, which prescribed the constitution and the methods of working of mutual aid societies. The new law introduced certain reforms, which however proved inadequate. Seventy-five per cent. of the small mutual insurance societies had no proper legal status, due in part to the formalities required for acquiring a proper constitution (2).

A single comprehensive law was required, whereby the reorganisation of the former local societies of mutual insurance would be stimulated and this type of society placed on a sound basis and its establishment encouraged. The Law of 1919 introduced certain fundamental reforms, which will be discussed later.

During the first five years after effect had been given to the reforms, 424 mutual insurance societies had received legal recognition, of which 276 were for insurance against losses of live stock.

At the end of 1930 the National Federation of Agricultural Insurance Societies was founded, which took in hand an extensive scheme for the reorganisation of the societies, a scheme which was particularly intended to apply to mutual societies of insurance against live stock losses (3). As already stated above, 990 Societies of this type were members of this body at the beginning 1937.

The most important society concerned with live stock insurance in Italy, a mutual insurance association against live stock mortality and losses of stock

(1) MARRONE. *Le assicurazioni bestiame*. Biblioteca di ragioneria applicata. Vol. XLIII, Unione Tipografica Editrice Torinese, p. 198.

(2) MAGGI, U. *Mutualità agraria*. Giulio Vannini. Brescia, 1935, p. 63.

(3) ACERBO. *La Cooperazione agraria in Italia*. Federazione Italiana dei Consorzi agrari. Piacenza, 1932, p. 50.

due to disease or accident, is the *Associazione Mutua Assicurazione contro la mortalità ed il deprezzamento del bestiame a seguito di malattia o infortunio*, which was founded in 1925 and is known as the M. I. A. B.

This is a body in the administration of which participate the shareholders in the guarantee fund, all insured persons bound by mutual contracts for a period of at least three years and the direct representatives of the syndical organisations. The M. I. A. B. insures cattle, horses in general, pure-bred race horses and stud horses, and also sheep. For cattle and horses in general, the Society has four principal forms of insurance, viz., against the case of mortality alone or of mortality and depreciation, or to cover a normal or a special rate of indemnity. For pure-bred horses the Society provides under a single form cover against the risks of natural death and of death due to accident. For sheep the Society provides insurance covering the sole case of loss due to natural mortality.

In 1935 the M. I. A. B. showed a total figure for premiums to cover risks directly insured amounting to 3,261,272.80 liras under 4,500 policies. In 1934 all the insurance policies of the Cremona Society had been transferred to the M. I. A. B. by Ministerial Decree of 31 December 1934.

The M. I. A. B. also entered into agreements with the National Federation of agricultural mutual insurance societies for the reinsurance of the small insurance societies which undertake live stock insurance business (1).

A brief account may here be given of the local mutual insurance societies for live stock in the province of Trento, which have frequently attracted attention on account of their number and methods of organization.

The administration of the province of Trento, where the co-operative spirit of mutual assistance is strongly diffused, founded immediately after the war a Provincial Federation of mutual insurance societies for live stock, which was replaced at a later stage by a Provincial Inspectorate of live stock insurance societies. In order to secure the assistance of the Inspectorate, the societies were required to adopt a standard form of rules (which might also contain special local clauses) and to obtain legal recognition. In addition they were expected to use all the registers and account books supplied to them by the Inspectorate, so as to secure uniformity in the methods of accountancy and administration adopted.

The registers of the societies are inspected at least once a year by the inspecting staff, which draws up a balance sheet for each society at the close of the financial year. At the opening of each half-year a commission of three experts makes a report on the financial position of each society. The society pays compensation to its members in all cases of mortality or the compulsory slaughter of the insured animals up to 80 per cent. of their insured value and the matter of a decrease in the value of the animals is not taken into account. The view that has been held in some societies that compensation for losses

(1) *Il Villaggio ed i Campi*. Roma, 20 dicembre 1936. *Annuario Italiano delle Imprese Assicuratrici*. Federazione Nazionale Fascista Imprese Assicuratrici. Roma, 1936, p. 141.

caused by epidemics should not be admitted has not found favour. The Inspectorate acts as technical advisor for the societies and, at the request of the parties concerned, as arbiter in any disputes that may arise between the societies and their members. Since the end of the War and up to 1929, 200 of these societies were founded and legally recognised; during the period a large number suspended operations on account of the heavy losses that have been sustained. In 1932 the number of societies for live stock insurance affiliated to the provincial Inspectorate numbered 104 (1).

Legal Provisions applying to Ordinary Live Stock Insurance Companies.

The insurance companies are constituted under the terms of the Decree-Law of 1923, which has been frequently amended (2). The provisions of the law are not applicable to the mutual agricultural insurance societies which were established under the Law of 7 July 1907 and the Decree-Law of 2 September 1919.

For the legislative measures prescribed for ordinary live stock insurance companies, reference may be made to the statement contained in the article published by the Institute on the subject of Hail Insurance in Italy (3). It is intended here to devote more special attention to the legal provisions relating to local insurance societies on account of the importance attaching to this mutual form of insurance in the branch here considered, whereas hail insurance is almost exclusively carried out by ordinary insurance companies.

Legal Provisions applying to Local Mutual Live Stock Insurance Societies.

GENERAL PROVISIONS.

In the first place, in order to obtain the privileges granted by the Law of 1919, the object of the agricultural mutual insurance societies must be to provide compensation for losses arising under certain agricultural risks, as established under the Regulations of 20 February 1920, and including live stock mortality. These insurance societies operate within a strictly local area, that is to say, limited to a commune or to a part of a commune, in which the society is situated, or limited to a number of neighbouring communes with a total

(1) *La Mutua Assicurazione Bestiame della Provincia di Trento*, 1929. Bollettino Agrario, Trento January 1934, p. 19.

(2) Decree-Law of 29 April 1923 converted into law on 17 April 1925, modified by the Decree-Laws of 24 September 1923, 5 April 1925, 27 October 1927, 17 July 1931, 26 October 1933 and 12 July 1934, this last converted into law with certain amendments on 12 February 1935.

(3) *Monthly Bulletin of Agricultural Economics and Sociology*. International Institute of Agriculture. Rome, August 1936, p. 275.

population not exceeding 5,000 persons; in larger communes divided into several districts, the area of the society cannot exceed the area of the district. According to the Regulations of 1920, there are also considered as forming part of the area of a society, agricultural or forestry undertakings situated outside such area, but in neighbouring communes in which the society, in accordance with its rules, is empowered to operate, on condition that such undertakings belong to an owner or farm operator who is a member of the society in which are included the chief enterprises in the district above mentioned.

In addition these societies are required to fix the maximum sum for their annual contributions within the limits laid down by the decree. The 1920 Regulations prescribed that this maximum should not exceed the sum of 30,000 liras for each branch of insurance and a total of 100,000 liras for all branches actually in operation. The Decree-Law of 27 October 1927, which among other provisions exempted these societies from the obligation to provide a caution fee, gave them also the advantage of reducing the minimum caution fee, when 60,000 liras had been obtained either in premiums or contributions for each branch of insurance, and 200,000 liras for all branches.

The societies must also observe the principle that the services of the officers of the society are given without charge (an exception however may be made in favour of the secretary and cashier) and all form of speculative business is prohibited.

The societies which fulfilled these requirements obtained, by virtue of the Laws of 1919 and of 21 October 1923 respectively, legal recognition through decree of the prefect. The Decree-Law of 12 July 1934 limited such recognition to societies for mutual insurance concerned with branches not specifically indicated in Art. 1 of this decree; live stock insurance was not so indicated.

The rules of the mutual societies must contain: (a) the name of the society, its headquarters and the district covered; (b) the branches of insurance that it purposes to cover; (c) the conditions for the admission and withdrawal of members; (d) the number, the system of election and the attributions of the managing board; and the appointment of members of the committee; (e) the limits and methods of payment of the contributions due from the members; (f) the manner of calling a general meeting and the conditions required to ensure the validity of its decisions; (g) the rules for drawing up the statement of accounts, for liquidating and paying compensation for losses, the use made of the profits for the financial year or the mode of apportioning losses; (h) procedure and conditions governing the winding up and dissolution of the societies.

RULES RELATING TO INSURANCE.

All owners and managers of farm enterprises, liable to the risks specified by the law, are entitled, since the passing of the Regulations of 1920, to become members of the local societies, provided that the board of management is of opinion that they provide the guarantees and satisfy the conditions prescribed by the rules. Owners and farm operators who are habitually engaged in the trade in live stock are precluded from insurance against farmstock mortality.

Persons accepted as members of the society are required: (a) to pay entrance fees; (b) to pay their annual contributions in advance, in proportion to the value insured, together with any supplementary contributions for which provision is made in the rules of the society; (c) to insure with the society, without limit, all kinds of stock they possess liable to one and the same risk, apart from exceptional cases as established by the rules, and in special circumstances as laid down by the board of management.

Members must pledge themselves to remain with the society for a period of one year.

A member who is insured against live stock mortality, in addition to his other obligations under the sanitary code, is required to declare all cases of sickness or accident which may occur for an animal covered by insurance, and, as from the time that his declaration is received, such animal is regarded as the property of the society, which shall decide what kind of treatment it shall receive or whether it is necessary that it should be destroyed.

The rules shall fix the maximum amount of compensation which, having regard to the extent of the loss sustained, may be awarded by the societies and in the case of insurance against live stock mortality must not exceed 80 per cent. of the loss.

No member is permitted under any pretext or through any kind of institution to insure any part of the risk not covered by the society.

REINSURANCE.

These societies may make provision for the reinsurance of their risks or for safeguarding their interests by uniting to form federations of mutual societies or reinsurance societies. These institutions acquire legal status by decree of the Ministry of Corporations. The same decree gives approval to the rules, which must be prescribed by the General Meeting of the representatives of the associated mutual societies. The Decree-Law of 21 October 1923 introduced certain modifications into the provisions contained in the Law of 1919.

The rules of the federations of mutual societies or of reinsurance societies shall determine: the headquarters of the institution, the area within which it operates, its objects, owned capital, the contribution of the federated societies, system of payment, the form of representation and the organs of administration, the rules relating to the liability, whether of the federation or of the reinsurance society or of the mutual insurance societies, or of the administrative officers among themselves or towards third parties; the technical provisions of the scheme of reinsurance, the rules for the supervision of the federated societies, together with the rules for the disposal of the credit balance shown in the balance sheet and for the amortisation of any debit balance.

In order to establish federations of mutual insurance societies or societies for reinsurance, an initial membership of at least 10 societies is required. If the number of member-societies at a later date falls below this figure, a ministerial decree will be necessary to enable them to continue in function.

The supervision exercised by the federations or reinsurance societies has the following purposes: (a) to be satisfied that all the rules and internal regulations, whereby the associated mutual insurance societies are regulated, are duly observed; (b) to vouch for the regularity of the working of the accountancy and administrative offices of the society; (c) to carry out supplementary functions by way of advice, instructions and rulings, intended to promote the objects of these societies and to assist them in their work, more particularly as regards the adoption of preventive measures against the ailments of live stock.

For reinsurance purposes, the amount of the annual contributions for each mutual insurance society shall be approved by the federation or reinsurance society. This body shall also determine for each society the maximum and minimum share in the risk for which the society can be held liable.

The federations or reinsurance associations constituted and operating in accordance with the regulations contained in the Decree-Law of 1919 enjoy the same advantages as those allowed for the mutual societies. The federations or other associations for reinsurance are under the supervision of the Ministry of Corporations.

The Regulations of 1920 laid down that insurance, which is compulsory for the hail branch, is optional for the live stock and other branches. The society is however required to assume liability for a fixed share in the risks accepted, which in the case of live stock insurance may not be less than 30 per cent. At the same time the mutual insurance societies may undertake reinsurance up to 90 per cent. for the particular risk of mortality due to epidemic disease, retaining at its own charge the balance up to at least 10 per cent.

The Decree-Law of 1919 prescribed that agricultural mutual societies which, for reasons beyond their control, do not combine to form federations, shall not enjoy the fiscal and financial privileges allowed under the terms of this law, which will be discussed later.

Financial Organization of the Mutual Insurance Societies and of the Federations.

The Regulations of 1920 contain important provisions in this respect. In the first place the mutual insurance societies must conduct each branch of insurance separately and the rules of the society must prescribe, in addition to a general registration fee, a special entrance fee for each branch in which each member desires to participate. Societies are moreover permitted to combine under a single form of management the different branches of insurance business.

The rules shall establish, not only the amount of the entrance fee, but also the rules to be followed for the constitution of the reserve funds for each branch of insurance and the exact methods for levying first charges on these funds in the event of a deficit. The assignment and distribution of remainders as also the distribution of deficits on the working must be effected separately for each branch of insurance. The general reserve fund is intended to meet any depreciation or losses in the assets and to realize the other objects set out in the

terms of constitution. This fund is constituted by means of the general entrance fees and by a first charge of 10 per cent. on the special reserve fund now to be described.

The special reserve funds for each branch of insurance are made up of the special entrance fees for the various branches of insurance and by a first charge on the profits realized by each branch at the rate established in each case (which amounts to 50 per cent. in the case of live stock insurance) together with the interests on these funds. These reserves must be maintained so long as their total does not exceed the limit allowed for the live stock insurance branch or three times the total of the contributions for the last financial year. Should the reserve funds fall below the prescribed limits, the society is expected to re-establish its reserves.

The regulations prescribe rules for the investment of the reserve funds and these provisions are also applicable to the federations.

Fiscal and Financial Privileges Allowed to the Insurance Societies.

According to the terms of the Decree-Law of 1919, the documents under which these insurance societies are legally constituted and the documents relating to the admission and resignation of members are exempt from registration fees and stamp duties. This exemption is also allowed for all documents and accounts relating to the operations carried out by the societies. At the same time all sums which the agricultural mutual societies pay annually into the reserve fund are exempt from income tax. This exemption, however, does not apply to sums which, having been once included in the reserve fund, are at a later date, at any time or for any reason, distributed among the members, or are utilised to increase the capital of the society.

The Regulations of 1920 empowered the Ministry of Industry, Trade and Labour, later transferred to the Ministry of Corporations, by agreement with the Ministry of Agriculture, as regards the branch of insurance here discussed, and also with the Ministry of Internal Affairs, to take action in favour of agricultural insurance. The support of the Department was not confined to direct encouragement of the establishment of mutual insurance societies and of federations of such societies and in assisting, from the administrative and technical standpoint, local efforts made with the object of instituting such societies and federations, when, having regard to the special conditions of the local agricultural system, such forms of insurance are necessary and desirable, but also by showing an interest in the administrative organisation and accountancy methods of the societies and federations and by organizing competitions, etc.

With the object of encouraging the establishment of insurance societies or federations, the competent Ministry has authority to send representatives to consider the local conditions for agricultural insurance and the risks involved and to encourage local initiative, and to invite the parties concerned or the promoters to take part at the expense of the Ministry in lectures or in other reunions. In addition the Ministry may cause propaganda publications to be prepared, in which special attention is given to the organisation of agricultural

insurance on the administrative and technical sides, according to the varying conditions of local agriculture and the special character of the risks involved. The Ministry may also supply the societies and federations with the account books, registers and other printed matter required for the purposes of their administrative functions, either in the early stages of their work or at a later date.

It is however of even greater importance that the competent Ministry also received authority under the Regulations of 1920 to grant subsidies to the federations, which for reasons other than mal-administration, have lost a part of their owned capital in such manner as to jeopardise the existence of their organisation, or have closed the last financial year or years with a loss or have exhausted their surplus funds by abnormal withdrawals from the reserve fund. The loss must be due to exceptional circumstances and not to faulty management or to disbursements not sanctioned by the law and by the rules, nor attributable to material defects in the technical and financial organisation of the society. In addition subsidies may be allowed to federations which have expanded or have the intention to expand their field of operation by taking over other branches of insurance, included among those allowed by the law, or to federations during the early days of active working.

In special cases such subsidies may likewise be granted directly to the mutual insurance societies.

These subsidies are in no case allowed to mutual insurance societies or federations that fail to observe the legal provisions in force, the terms of the rules and the regulations of the Ministry regarding technical organisation and the preparation of the balance sheet. In every case it must be shown that the insurance society or federation is keeping its costs of administration within the limits which are in accord with its standing and with the objects that it professes to fulfil.

The competent Ministry, in considering these requests, may rank them according to their importance and reserve complete liberty of action, having regard to the funds available in the budget and the various requirements of the societies. In considering the grant of a subsidy, the Ministry may make any enquiry that may be considered desirable, even to the extent of conducting an inspection of the working of the society applying for assistance. In such case the society will be required to submit to the officers appointed to carry out the inspection all its account books, registers and other documents and to supply all information desired.

Subsidies may be allowed to a single society or federation for not more than three consecutive years, except in special cases, supported by all the documents required. When the Ministry has reason to suppose that the funds available are not adequate to meet the necessities of the case, a preference may be given, in granting subsidies, to societies in the provinces which stand most in need of agricultural insurance.

An additional important concession, allowed by the law for the benefit of agricultural insurance societies concerned with live stock insurance, is conferred by the Decree-Law of 12 July 1934. Under its terms there are exempted from the obligation to prove the existence of a certain capital or guarantee fund,

insurance societies giving protection against loss or damage, which within the boundaries of the Province in which they have their headquarters undertake insurance work in one branch only, not specifically indicated in Article 1 of the law quoted (in which live stock insurance is not included), and provided that the amount of the yearly premiums does not exceed 60,000 liras in each commune.

National Fascist Federation of Mutual Live Stock Insurance Societies.

On 16 August 1934 legal recognition and approval were accorded to the terms of constitution of this organisation, which is affiliated to the *Ente Nazionale Fascista della Cooperazione* and is a member of the Fascist Confederation of Credit and Insurance Undertakings. The sole object of this latter connection is to ensure extension to the insurance societies represented by the Federation of the validity, both of the collective labour agreements stipulated by the Confederation in question and by the syndical associations of similar undertakings linked in the Confederation, and also of the rules which are assimilated to those of the Confederation.

The headquarters of the Federation are in Rome and its competence extends to the whole Kingdom, while in virtue of its legal recognition and within the limits of its competence as established by law and by its terms of constitution, it forms the national representation of the agricultural mutual live stock insurance societies.

The principal objects of the Federation are as follows: (a) to represent legally, according to the provisions of the law, the mutual live stock insurance societies with the labour magistracy, and with the political and administrative authorities and other syndical associations, institutions and associations having a national character and objects of concern to the categories represented; (b) to study and to resolve, in accordance with the laws and with the recommendations of higher organisations, the economic and social problems relating to the category represented; (c) to intervene, within the limits established by the law, in the stipulation of collective agreements having effect within the limits of the territorial area and on the category represented by the Federation and to exercise conciliatory action in the collective and individual disputes which may concern the category; (d) to encourage the formation, constitution and regulation of the mutual insurance societies represented; (e) to encourage collaboration with the other forms of insurance undertakings and with other co-operative elements in the national economy; (f) to protect the interests of the associated institutes, promoting their technical and economic development in harmony with the interests of the nation and of its productive activity, and in accordance with the general recommendations of the higher bodies; (g) to encourage and promote the development of all movements having reference to the objects here indicated.

All mutual live stock insurance societies registered in the lists of the provincial councils of corporative economy may belong to the Federation. They shall declare that they accept the rules of the Federation, and engage to pay the obligatory and additional contributions established in virtue of the provi-

sions of the law or of the terms of the constitution, and strictly to observe the social discipline. The registration of these societies in the Federation is for five years, but it may be renewed by mutual tacit consent for an equivalent period. Decision as to the admission of insurance societies rests with the Council of the Federation. In cases of refusal appeal is allowed to the *Ente Nazionale Fascista della Cooperazione*, and in the last resort to the Ministry of Corporations.

The insurance societies associated in the Federation may not at the same time, under penalty of exclusion, belong to *de facto* associations having the same syndical objects. Exclusion of the societies may take place either by resignation, by expulsion on the decision of the Council of the Federation, or by loss of the qualifications required for admission.

The associated societies are expected: (a) to transmit each year the general and financial report and the reports of the auditors; (b) to communicate to the Federation any changes made in their constitution and any rearrangements or innovations introduced into the charges made by the society; (c) to supply promptly to the Federation and to the *Ente Nazionale Fascista della Cooperazione* all the elements, information and data required by those bodies in the exercise of their functions; (d) to observe strictly the clauses of collective agreements in conformity with the law; (e) to inform the Federation of all disputes arising between the associated societies and their employees on the subject of labour relations; (f) to declare to the Federation, within the period and in the manner established by the law, the number of persons coming within the scope of their activities.

The Federation may distribute the associated societies into provincial, inter-provincial and national syndicates.

The organs of the Federation are: the General Meeting, the Federal Council and the Secretary.

Model Rules of the Mutual Live Stock Insurance Societies.

In order to render as far as possible complete this study of agricultural mutual insurance of live stock in Italy, data are added relating to the model rules of these associations, established by the National Fascist Federation of Mutual Live Stock Insurance Societies in agreement with the Insurance Service of the Ministry of Corporations.

By the direction thus given to their activities, it becomes open to the societies, as will later appear, to obtain positive results, not only in respect of live stock insurance in the narrower sense, but also in the other spheres of the societies' action, such as prophylactic safeguards against and prevention of infectious stock diseases, stable and shed hygiene, and veterinary treatment in the event of stock diseases.

It may be specially noted that it is now open to the societies to provide for compensation of losses arising from rejection of meat at the slaughterhouse; in this way the risks inherent in slaughtering are also covered. This represents an important innovation, for at the time when the agreement was reached in respect of the model rules, the insurance of slaughter stock was effected by dealers

through ordinary insurance companies. Under these new provisions the mutual insurance societies may follow the animals through up to death, whether due to accident, disease or to slaughtering in the ordinary course.

A further activity which the mutual insurance societies may usefully exercise is that arising out of the possibility now open to them of promoting the marketing and sale of insured animals and of their meat, including the cheaper cuts, etc., according to the forms to be established by the board of management and in the interests of members. This does not imply that these societies may carry on commercial activity as to the sale of live stock and of meat, but that they may collaborate in the constitution of co-operative organisations formed for this purpose, or they may entrust to organisations already in existence the marketing and the sale of the insured stock and meats.

Special mention should also be made of the provisions in regard to the reinsurance which may be effected by the mutual insurance society. The power to reinsure counteracts the disadvantage of the restricted sphere of action of the society; if on the other hand the society offers numerous advantages, without completing them by reinsurance, it possesses the defect of making no provision for a systematic distribution of risks (1). The following are the most important of the provisions of the model rules.

The societies in question are established for a period of 30 years which may be extended. They are administered in accordance with mutuality principles to the exclusion of any speculative character and with the following objects: (a) to compensate members within the limits established by the model rules for the losses due on the one hand to the death of the insured animals, whether due to natural or to accidental causes, and also if occasioned by infectious disease, or on the other hand by compulsory slaughter; (b) to give attention to the hygiene of the stables, the prevention of infectious diseases of stock and to all that relates to the maintenance and improvement of the insured stock. Compensation may also be given for losses arising from the rejection of meat at the communal abattoir and at neighbouring abattoirs, provided that the board of management of the society has in the latter case arranged for suitable measures of control. The society may, if the general meeting so decide, also make provision for first aid and for veterinary treatment of live stock as well as for the supply of the necessary medicines, with payment on the part of the member of an annual sum for each animal insured, such sum to be fixed by the board of management. The society may also promote, within the forms to be established by the management and in the interest of members, the marketing and sale of the insured animals and of their meat, including the cheaper cuts, offals, etc.

Full membership of the mutual insurance societies is open to all owners of live stock resident within the area served by the society and undertaking to insure all the live stock belonging to them and existing on that area. The members give this undertaking for two years at least and it is only terminable

(1) *Il Lavoro Cooperativo*. Organ of the National Fascist Institute of Co-operation, 14 June 1934.

earlier by the death of the member or by his ceasing to own live stock. Applications for admission to the society are addressed to the board of management, which has the right to accept or refuse members. Appeal may be made against refusal by the society to the National Fascist Federation of Mutual Live Stock Insurance Societies. Membership is not open to owners of live stock: (a) who have insured their animals elsewhere and for the same risks; (b) who are dealers in live stock; (c) who have on their own stabling premises animals suffering from epizootic or contagious diseases or which are in a poor condition of health. If any of these conditions occur after admission, the members in question are excluded by a resolution of the board of management.

The model rules contain provisions relating to general meetings and to the board of management the auditors, the advisory committee, and the commission of experts.

The maxima and minima age limits are laid down in respect of the admission of animals to insurance, and admission is conditional also on an inspection and judging by experts who, after taking the opinion of the communal veterinary surgeon, has to establish for each animal the general characteristics (breed, sex, age, coat, etc.) and suitability for insurance. If a member is not prepared to accept the judging of the animals owned by him, he may appeal within three days to the board of management, which will make arrangements for a fresh judgment by a committee of arbitration. The President pronounces finally on the admissibility of each animal on the basis of the applications made and of the expert's report. In the event of refusal of admission, appeal may be made within three days to the board of management, whose decision is final.

In the case of death or compulsory slaughter of an animal admitted to insurance, if it appears that the causes were pre-existing at the time of the judgment, the insurance, in accordance with the provisions of Art. 429 of the Commercial Code, is cancelled and the contributions already paid to the society are reimbursed to the member for the part referring to the period not already elapsed.

The insurance is terminated: (a) by the death of the insured animal; (b) by the resignation or enforced withdrawal of the member; (c) by the sale of the animals to buyers who are not members; (d) when the animal is transported outside the area served by the society and is not brought back within the time fixed by the society, unless the delay is due to local usages; in the latter case the authority of the board of management is always necessary.

Besides the entrance fee, members are expected to pay the usual contributions and supplements to the extent and in accordance with the rules established by the board of management. The contributions are calculated at a percentage rate established on the basis of the valuation of each animal insured.

In the event of the death of the member, the heir takes his place with the same conditions of insurance. If the insured animal is sold, the insurance continues in the name of the new owner if he is a member of the society, otherwise the insurance lapses. In any case, the seller is expected to pay the contributions for the half year in course.

The model rules contain provisions relating to the substitution of another animal for an insured animal sold by the member-owner.

Every member is obliged within eight days to notify the President of any change that has occurred with respect to the insured animals, including the case in which the animal has reached the maximum age, with all the defects and vices that may impair the value of the insured animal. In consequence, and if necessary, the President orders a new valuation of the insured animal.

The member is obliged to notify immediately every case of sickness, accident or death of the insured animal. In the event of disease or accident of the insured animal, the member is obliged to follow with the utmost care the instructions referring to the attention to be given to the animal. The procedure for the payment of the cost of veterinary treatment and of the necessary medicaments is established by the internal regulations. On notification of a claim for loss the President summons the committee of experts in order that it may, with the assistance of the communal veterinary surgeon, identify the animal which has died or has had to be slaughtered, ascertain the causes of the loss, enquire as to the liability or fault of the member and finally decide the value of the animal at the time of the loss, *viz.*, at the onset of the disease, such value serving as basis for the calculation of the compensation.

Compensation shall be paid on the basis of 80 per cent. of the value of the animal as established by the committee of experts and cannot exceed 80 per cent. of the sum for which the animal was insured. The sum accruing from the utilisation of the carcase goes to the insurance society, which provides for the costs of such utilisation. For the loss resulting from the rejection of the meat at the slaughterhouse, the compensation consists of the difference between 80 per cent. of the sale price established and the actual proceeds after such rejection and cannot exceed the difference between the actual value after rejecting the meat and 80 per cent. of the sum insured, provided that the selling price does not exceed the value as established by the committee of experts. If the member receives from other persons (guaranteed sellers) or by means of a subsidy compensation on the animal in question for the same reason, the relative amount is to be paid over to the society up to a sum equal to the indemnity paid, after deduction of the proceeds of the carcase, which should be valued in the event of death by the communal veterinary surgeon.

The model rules contain provisions relating to the period of time during which the society may require the reimbursement of the payment of the compensation.

Payment of compensation cannot be made: (a) for losses arising out of the occurrence of earthquakes, wars or fires; (b) when the member arranges of his own accord for the slaughter of the animal, unless immediate slaughter has been ordered by the competent authority; (c) when the member refuses to carry out the necessary slaughter ordered by the society or when he does not carry out the instructions of the veterinary surgeon or maltreats or neglects

the animal affected during the period of treatment. Refusal of compensation is pronounced by the President, and appeal may be had against the decision to the board of management, which decision is final.

In regard to reinsurance the society, in accordance with the rules established by the Decree-Laws of 2 September 1919, 26 February 1920 and 21 October 1923 and after discussion by the board of management, is required to provide for reinsurance with the societies authorised in accordance with the Law of 29 April 1923 and designated by the National Fascist Federation of Live Stock Insurance Societies under the conditions fixed by the Federation.

Further provisions in the model Rules refer to the financial organisation, to the balance, to disputes, etc.

Compulsory Notification in the event of Death.

The General Department of Public Health on 27 December 1929 rendered obligatory, as from 1 January 1930, the notification of cases of the death of animals occurring for any reason whatever. In virtue of this provision all owners, or substitute owners, of animals, whether horses or mules, cattle, pigs, sheep or goats, shall notify within three days at most all cases of death or slaughter in consequence of disease or accident, which may occur among animals of the kinds indicated.

As a result of this provision, the live stock insurance branch now possesses valuable statistics on which the determination of the premiums and the reinsurance contracts can be based. (1)

Live Stock Insurance and Agricultural Credit.

A recent circular of the Ministry of Agriculture has illustrated the value of collaboration between local mutual insurance societies, the advantages of which on the economic side are stressed in the circular, and institutions operating agricultural credit. This question had already been examined in 1911 at the Congress of Agricultural Consortia of the Italian Federation of Agricultural Consortia and was also discussed at the last National Milk Congress.

The principles underlying this collaboration may be summed up as follows:

(a) the increase in the numbers of live stock required to meet the deficit of the balance of trade as regards the meat market may be facilitated by the development of credit for stock farming; (b) grants or loans made by agricultural credit institutions may be secured by the covering of all live stock risks (mortality, epizootic diseases, accidents, etc.). This requirement may be met by depositing with the credit institutions insurance policies against risks from live stock mortality; (c) this guarantee may be given by the local insurance societies in a form especially favourable from the economic standpoint; (d) on the basis of a wider cover of risks in consequence of this guarantee, the agricultural credit institutions are able to apply reductions on the discount rates

(1) MAGGI, U., *op. cit.*, p. 105.

in force at the present time; these reductions may be made in the form of a share taken by the credit institution in the payment of the insurance premiums, instead of direct assignment to the farmers concerned; (e) by making the grants to farmers through the live stock insurance societies there is more certainty that the assistance will be applied for agricultural purposes; (f) share tenants, tenants and small holders who are often without any real property to deposit as guarantee may, by insuring their live stock, benefit by agricultural credit in consequence of the greater security which would accrue by this system to the credit institutions (1).

Statistical Data.

The latest statistics published by the Ministry of Corporations may be given here.

In 1934 six insurance societies were directly operating live stock insurance. The data published here are not inclusive of those relating to the local mutual insurance societies, the particulars of which were given at the beginning of this article.

In the first place the total is shown of the annual premiums paid for new policies and also the total of the receipts referring to the policies in course completed previously, as also the percentage of increase or decrease occurring during the year 1934 by comparison with 1933.

	1930	1931	1932	1933	1934	%
Premiums on policies taken out in the respective years . .	6,330,317	4,794,875	4,073,019	3,244,792	3,933,573	+ 21.22
Receipts for policies in course	2,216,144	1,992,410	1,441,893	1,556,922	1,08,130	— 93.05

During the year 1934, premiums to the value of 684,000 liras were paid to the *Unione Italiana di Riassicurazione*.

In the table which follows are shown the premiums which can be assigned to the financial year 1934, *i. e.*, determined by taking into account alike fractions of the premiums belonging to the previous year and fractions of premiums relating to the subsequent year. The claims on losses are shown by way of comparison. In judging the ratio between premiums and claims, which is of a purely technical character, it should be noted that the table omits management costs, while the total amount of the premiums includes purchase commissions as well as arrears of premiums.

	1930	1931	1932	1933	1934
Premiums assignable to the financial year . . .	8,355,473	7,093,901	5,814,345	4,916,521	4,046,000
Claims	6,253,564	5,575,849	5,961,571	3,842,612	2,990,000 (2)

F. ARCOLEO.

(1) MARCHI. Mutue bestiame e credito zootecnico. In *Cooperazione Rurale*. Rome, June 1936, p. 38.

(2) Ministero delle Corporazioni. Servizio delle Assicurazioni. Gli Istituti e le Imprese di assicurazione in Italia. Rome, 1931, and following years.

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Losses and damage caused by the forces of nature and insurance against these form the subject matter of this study, which is the first to treat the question fully and systematically with the object of preparing the ground for the development and improvement of this type of insurance.

This publication, which has been prepared under the auspices of the Reinsurance Union of the Swiss Cantonal Fire Insurance institutions by two of its officials, consists of two volumes, of 250 and 1150 pages respectively.

The first volume, after a brief introduction, deals first with some theoretical considerations relating to the different kinds of disaster (torrent waters, floods, hurricanes, avalanches, landslips, falls of rock, hail, etc.), their origin and the means of prevention. This discussion is followed by a survey of the bases and practice of insurance against losses due to the action of natural forces as operated in Germany, Austria, Hungary, France, Italy, Netherlands, Denmark, Norway, Sweden, Finland, Russia, Bulgaria, United States of America. Next comes a detailed examination of the development of insurance against losses due to the action of natural forces in Switzerland, and a note on the various endeavours and plans made by the Confederation for the remedying and compensating of these losses or damage. This first volume also includes a section dealing with a scheme of international insurance of losses caused by torrents and also with the nature and objects of the *Union Internationale de Secours*.

The second volume is devoted to the handling of this type of insurance in the different cantons. Each survey is divided into three sections, historical, legislative and economic. In the historical section a detailed chronicle is given from various points of view of actual losses due to natural forces in the canton in question; the second section deals with the progress in reparation of losses within the canton, and the third presents statistics and analytical considerations, together with an attempt at general estimation of the risk for each canton separately.

A gap which existed in the systematic study of this important question is filled by this publication.

C. EVELPIDI. Les Assurances Agricoles. Athens, 1936 (in Greek).

This study on agricultural insurance, in the Greek language, opens with a note on the meaning and objects of these forms of insurance, their development and organisation. The subject matter is then treated in three sections: insurance of agricultural return; insurance of farm capital and insurance of farm workers and of farmers.

The first section deals in the first instance with hail insurance (damage from hail, technique of hail insurance, its development, institutions operating this branch of insurance, the extent of this insurance and hail insurance in Greece), and further with other risks to which the agricultural return is exposed.

The second section treats first of live stock insurance (various kinds of live stock insurance, its historical evolution, organisation and working, special character of this branch, the insurance policy and its application, live stock insurance in Greece). Next follows a short survey of the other branches of insurance of farm capital (fire insurance, insurance against forest fires, and other risks to which the farm capital is exposed).

The third section treats in the first instance of the insurance of farm workers (accident and sickness insurance, maternity insurance, life insurance, old age and unemployment insurance, family allowances). In addition it deals with the insurance of small cultivating holders, *e. g.*, popular insurances in the country, co-operative health societies, liability insurance.

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THE SPREAD BETWEEN PRODUCERS' AND CONSUMERS' PRICES OF CERTAIN FOODSTUFFS IN AUSTRIA

I. — Introduction.

Though the spread between producers', wholesalers' and consumers' prices of foodstuffs has been the subject of much discussion in Austria the existing scientific literature is scanty (1). There has been in Austria a considerable growth in the importance of the trader as measured both by the volume of goods traded in, and the proportion of the population engaged in trade. Whereas the number of persons engaged in industry has increased since 1902 only by 3.8 per cent. the number in trade has increased by 31.9 per cent. The second of the works cited in the footnote argues that the expansion of the commercial class and the intensified competition in trade, the working at undercapacity caused by trade fluctuation, and the increased demands made by the consumer have all contributed to a noteworthy increase in distribution costs. The increase in production capacity through rationalisation methods coincident with falling demand has, on top of these factors, led to still more intensive competition in selling and still higher marketing costs.

The following study makes use not only of these published studies but of a number of unpublished investigations by the Austrian *Institut für Konjunkturforschung*, as well as of original investigations by the writer. Recently the Austrian *Institut* has made studies of price spreads in the trade in some foodstuffs and publishes periodically figures showing the changes in the retail spread as a percentage of the wholesale prices. The table on page 184 indicates the average monthly retail spread for ten foodstuffs, as a percentage of the wholesale price, from 1929 until the beginning of 1937.

Prices of agricultural products in Austria are to a certain extent subject to very stringent government control. Apart from the restrictions on imports, the effect of those on internal trade is very considerable. These latter restrictions relate mainly to dairy products and meat. The price of bread is also constantly subject to State regulation, while that of sugar is determined by the

(1) 1. DENKSCHRIFT DER PRÄSIDENTENKONFERENZ DER LANDWIRTSCHAFTLICHEN HAUPTKÖRPERSCHAFTEN ÖSTERREICHS ÜBER MASSNAHMEN ZUR SICHERUNG DES WEITEREN BESTANDES DER BERGBAUERNCHAFT. — 2. JAHRESBERICHT 1936, HERAUSGEGEBEN VOM ÖSTERREICHISCHEN KURATORIUM FÜR WIRTSCHAFTLICHKEIT. Verlag Julius, Springer, Wien, 1936. — 3. DENKSCHRIFT DER LANDWIRTSCHAFTSKAMMER FÜR KÄRNTEN ÜBER DIE KRISE DER KÄRNTNER LANDWIRTSCHAFT. Klagenfurt, 1935.

	Jan.	Febr.	March.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1929	40	39	34	34	35	45	30	36	37	41	39	41	38
1930	43	43	43	45	46	36	37	40	43	32	40	41	41
1931	45	45	41	41	41	37	31	37	38	40	35	36	39
1932	40	37	36	35	35	31	30	34	34	31	30	33	34
1933	33	33	33	31	34	27	33	33	34	33	33	31	32
1934	30	30	28	31	31	31	34	30	31	31	30	30	30
1935	30	31	31	32	31	28	26	30	31	31	31	34	30
1936	35	36	37	35	34	29	32	32	33	29	30	30	33
1937	27	28	28	—	—	—	—	—	—	—	—	—	—

sugar cartel. The prices of other commodities are controlled by means of taxation or customs duties.

An important position in the trade in agricultural products is occupied by the agricultural co-operative societies, which also receive very considerable State encouragement. It is due to their action that the margin between the producers' prices and the wholesale prices of those commodities, the trade in which is not subject to state control, is liable to comparatively small fluctuations only and is maintained within moderate limits. On the other hand in the case of those commodities which are subject to State regulation, as are dairy products, or to cartel agreement, as is sugar, the margin between wholesale prices and producers' prices may be wide.

In general terms the following may be said in regard to the development of this margin, or "spread" between producers' prices and wholesale or retail prices: In the case of commodities the trade in which is under control the difference between producer's and consumer's price has considerably increased since 1929, the greater proportion of the increase being, not on the retail trade margin, but on the margin between wholesale price and producer's price. A definite factor in the variation in these price margins was the "crisis supplement" of August 1932 which doubled the tax on the turnover of goods (*Warenumsatzsteuer*) in the case of all commodities subject to this tax, with the exception of potatoes, bacon, lard, pig fat and rye flour.

2. — Bread and breadstuff cereals.

The normal bread in Austria contains about 75 per cent. rye flour and 25 per cent. wheat flour. In recent years endeavours have been made to stabilise the price of bread by means of an elastic tariff policy. For other household purposes wheat flour is exclusively used. The retail trade margin of wheat flour keeps within the limits shown in the accompanying table and has increased since 1931. By comparing with the wholesale prices of wheat the extent of the milling margin may be deduced. There have been added to the table the wholesale price for 75 kg. of rye and the same for 25 kg. of wheat, so as to obtain the price for 100 kg. of breadstuff cereals. It is then possible to compare this

last price with the price of bread and so obtain an idea of the course of the difference between the price of bread and that of breadstuff cereals.

Next in importance after bread are the small bread (*Kleingebäck*) and rolls (*Semmel*) made from wheat flour. There is no weight definitely prescribed

Years	I Wheat: Price in national wholesale trade Sch. per 100 kg.	II Wheat flour: Price in national wholesale trade Sch. per 100 kg.	III Spread between wholesale wheat and wholesale flour prices Sch. per 100 kg.	IV III as percentage of wheat price %	V Wheat flour: Retail price Sch. per 100 kg.	VI Spread between wholesale wheat and retail flour prices Sch. per 100 kg.	VII VI as percentage of wheat price %
1923	36.57	60.54	23.97	65.5	64	3.46	5.7
1924	36.77	64.17	27.40	74.5	65	0.83	1.3
1925	47.35	83.04	35.69	75.4	87	3.96	4.8
1926	40.96	78.23	37.27	91.0	82	3.77	4.8
1927	40.97	71.17	30.20	73.7	75	3.83	5.4
1928	39.59	66.00	26.41	66.7	70	4.00	6.1
1929	33.29	59.96	26.67	80.1	64	4.04	6.7
1930	27.96	59.35	31.39	112.3	65	5.65	9.5
1931	25.40	53.79	28.39	111.8	56	2.21	4.1
1932	33.58	65.25	31.67	94.3	68	2.75	4.2
1933	35.06	70.38	35.32	100.7	73	2.62	3.7
1934	35.67	66.29	30.62	85.8	71	4.71	7.1
1935	36.47	65.15	28.68	78.6	70	4.85	7.4
1936	35.03	64.30	29.27	83.5	69	4.70	7.3

Years	Bread				Small bread or rolls (<i>Kleingebäck</i>)			
	I	II	III	IV	V	VI	VII	VIII
	Bread cereals (1) Sch. per 100 kg.	Price of normal bread in Vienna Sch. per 100 kg.	Spread between prices of bread cereals and of bread Sch. per 100 kg.	III as percentage of price of bread cereals %	Small bread (<i>Kleingebäck</i>) Sch. per 100 kg.	Wheat flour Sch. per 100 kg.	Spread between Small bread and wheat flour prices Sch. per 100 kg.	VII as percentage of wheat flour price %
1923	32.17	51.50	19.33	60.0	103	60.54	42	69
1924	35.05	59.22	24.17	69.0	130	64.17	66	103
1925	42.07	63.72	21.65	51.5	169	83.04	86	104
1926	31.09	57.88	26.79	86.2	169	78.23	91	117
1927	38.55	66.06	27.51	71.4	175	71.17	104	146
1928	39.34	70.42	31.08	79.0	175	66.00	109	165
1929	30.52	63.77	33.25	108.9	168	59.96	108	180
1930	21.94	59.50	37.56	171.2	168	59.35	109	185
1931	25.75	59.69	31.94	124.0	160	53.79	106	196
1932	30.34	65.47	35.13	115.8	160	65.25	95	146
1933	25.68	58.17	32.49	126.5	175	70.38	105	150
1934	26.93	57.36	30.43	113.0	167	66.29	101	153
1935	28.19	60.84	32.65	115.8	167	65.15	102	157
1936	28.00	60.84	32.84	117.3	167	64.30	103	161

(1) 75 kg. rye and 25 kg. wheat wholesale price.

Years	Wheat grits				Maize grits			
	I	II	III	IV	V	VI	VII	VIII
	Retail price Gr. per kg.	Wholesale price Gr. per kg.	Spread between wholesale and retail price Gr. per kg.	III as percentage of wholesale price %	Retail price Gr. per kg.	Wholesale price Gr. per kg.	Spread between wholesale and retail price Gr. per kg.	VII as percentage of wholesale price %
1929	74	64	10	16	68	60	8	13
1930	72	62	10	16	65	58	7	12
1931	66	55	11	20	59	48	11	23
1932	76	66	10	14	57	44	13	30
1933	80	71	9	13	55	38	17	45
1934	77	69	8	12	45	35	10	29
1935	70	67	9	13	46	39	7	18
1936	75	68	7	10	47	41	6	15

for this type. It is left to the individual master bakers to fix the weight so that fluctuations in the prices of flour are equalised by slight changes in the weight, without affecting the prices. The so-called *Kaisersemmel*, the standard roll, had during the years 1923 to 1933 an official weight of 4 hectogrammes (25 to the kg.); since 1934 it has had an official weight of 4.2 hectogrammes (23.8 to the kg.). As the price of small bread per kilogramme is calculated with reference to this standard, the number reckoned may be adjusted with the wholesale price of wheat, in order to trace out the variation in the milling, baking, and distribution margins. The milling margin in the table was deduced by means of comparison with the wholesale price of wheat flour.

In further explanation it may be added that the price of bread is very considerably influenced by the Government, as the large bakeries are subject to definite control.

The course followed by the wholesale and retail trade margins of the other cereal products of importance for nutrition, namely wheat grits and maize grits (polenta), and by the milling price margin for maize grits is also to be seen from the table.

3. — Meat.

In Austria pork and beef have a large market, but there is almost no market for mutton. By the legislation on the live stock trade of November 1931 meat prices became considerably higher. In consequence, however, of the great increase in pig-feeding undertaken in the country, there was up to 1933 a severe decline in meat prices, which it was attempted to check by limiting the number of animals placed on the market. It is for this reason that in the table given in the appendix relating to the development of meat prices in the provinces a difference appears between the course of prices on these so-called protected markets and that of prices on the unprotected markets.

In addition a price maintenance levy (*Preisstützungsabgabe*) was introduced which was utilised for the removal of cattle from the market, thereby keeping up the prices. Since markets in Austria depend for their upkeep on the market fees, as soon as the artificially inflated prices drop, the fees per head tend to rise sharply in consequence of the high fixed costs. In this way the spread between consumers' and producers' prices is considerably widened.

(a) *Pigmeat*. — As in the case of beef, we consider here the position on the Vienna meat market, which is the ruling market for Austria. The spread and its variations can be reckoned from the wholesale prices for live animals and the wholesale prices for meat. The retail trade margin is also shown in the table. The height of the market charges in Vienna is to be seen from the following table taken from the report of the Conference of Presidents.

Selling weight 70 kg.	
Sale price 70 kg. at 1.25 sch.	87.50 sch.
Costs	11.46 "
Net proceeds	76.04 sch.

Analysis of the costs:

Motor lorry transport (8 groschen per kg.)	5.60 sch.
Lump payment covering market fees and expenses	3.00 "
Litter	0.50 "
Disinfection	0.08 "
Declaration form stamp	0.20 "
Price maintenance tax (2 groschen per kg.)	1.40 "
City weighing fee (0.2 gr. per kg.)	0.14 "
Commission	0.50 "
Postage and stamps	0.04 "
	11.46 sch.

Pig fat was not examined, since it is imported for the Vienna market exclusively from abroad.

(b) *Beef*. — The price of beef has a twofold function. On the one hand it is decisive for the income of the breeders, who sell the cattle reared in the highlands for fattening on the plain. It proved however possible to establish only the course of the prices of live animals at St. Mark (the slaughterhouse of Vienna) and not that of the prices of the store cattle, which are decisive for the breeders. On the other hand the price of beef determines the income of the feeders who fatten the cattle. The movement of the spread between the prices of live cattle and the wholesale and retail prices for beef may be clearly seen from the table.

A complete statement of the market fees and charges taken from the same sources as in the case of pork is given as follows:

Selling weight	368 kg.
Sale price 368 kg. at 80 groschen	294.40 sch.
Costs	43.81 "
Net proceeds	250.58 sch.

Analysis of costs:

Freight per head for a minimum of 12 animals	20.00 sch.
Driver's wage	3.30 "
Cordage, etc.	0.18 "
City market fee	1.60 "
City inspection fee	2.00 "
Gratuity, about	0.50 "
Stall fee and insurance	0.16 "
Fodder	2.09 "
Apron fee	0.25 "
Fee stamps for concession form	0.60 "
Price maintenance tax (1 groschen per kg.)	3.68 "
Manipulation fee (0.3 per cent.)	0.89 "
Bank charge (0.3 per cent.)	0.89 "
Insurance for internal damage 1 per cent.	2.95 "
Commission 1½ per cent.	4.42 "
Postage	0.30 "

43.81 sch.

Pigmeat.

Years	I Wholesale price of pork pigs, Vienna II ^a Sch. per 100 kg.	II Wholesale price of pigmeat, Vienna Sch. per 100 kg.	III Spread between wholesale pig and pigmeat prices Sch. per 100 kg.	IV III as percentage of wholesale pig price %	V Retail price of pigmeat, Vienna Sch. per 100 kg.	VI Spread between wholesale and retail prices of pigmeat Sch. per 100 kg.	VII VI as percentage of wholesale pigmeat price %
1929	237	339	102	43	495	15	46
1930	203	292	89	44	483	191	65
1931	173	223	50	29	378	155	70
1932	173	233	60	35	403	170	73
1933	153	217	64	42	357	140	65
1934	127	179	52	41	318	139	78
1935	145	179	34	23	315	136	76
1936	158	197	39	25	332	135	69

Beef and Veal.

Years	I Wholesale price of steers, Vienna II Sch. per 100 kg.	II Wholesale price of beef, Vienna Sch. per 100 kg.	III Spread between wholesale steer and beef prices Sch. per 100 kg.	IV III as percentage of wholesale steer prices %	V Retail price of beef, Vienna Sch. per 100 kg.	VI Spread between wholesale and retail beef prices Sch. per 100 kg.	VII VII percent- age of wholesale prices %
1929	156	264	108	69	344	80	30
1930	147	257	110	75	360	103	40
1931	126	238	112	89	345	107	45
1932	125	248	123	98	322	74	30
1933	117	227	110	94	318	91	40
1934	108	218	110	102	298	80	37
1935	104	188	84	81	280	92	49
1936	117	154	37	32	280	126	82

4. — *Fish.*

In the consumption of fish primary importance attaches to sea-fish. Among fresh water fish carp is of special interest, and the course of prices for carp, wholesale and retail, are shown in the accompanying table. Although the retail trade price spread in absolute figures has shown a decline since 1929, in consequence of the marked decline in wholesale prices of carp, relatively there has been an increase in the margin.

Fish.

Years	Retail price of carp Gr. per kg.	Wholesale price of carp Gr. per kg.	Trading spread Gr. per kg.	Trading spread as percentage of the wholesale price %
1929	396	320	76	24
1930	348	288	60	21
1931	302	222	80	36
1932	270	191	89	47
1933	219	164	55	34
1934	212	154	58	38
1935	232	162	70	43
1936	242	177	65	37

5. — *Milk, milk products, and eggs.*

(a) *Milk.* — Up to 1929 a correspondence existed between the price of butter and the price of milk, *i. e.*, the proceeds from milk used for making butter were almost as high as the proceeds from the sale of milk for direct consumption. Then the butter price was forced down by foreign competition, so that the relation between the proceeds from sales of fresh milk and from its

transformation into butter was upset. The supply to the market of fresh milk accordingly increased, while at the same time, owing to the economic crisis, there was a marked decline in consumption. Regulation of the milk market supervened. A distinction was made between the price for milk for direct consumption and the price for milk for manufacturing purposes. The latter price was fixed at 10 groschen per litre below that of fluid milk. Moreover a quota was from time to time established, in accordance with which each producer might sell a certain portion of his milk as fluid milk and was obliged to sell a certain proportion as milk for dairying purposes. On 17 July 1931 the Milk Compensation Fund (*Milchausgleichsfond*) was set up. The idea was to impose on each farmer who had milk to sell as fluid milk a levy which was to be for the benefit of those farmers who were compelled to allow their milk to be used for butter and cheese making. The levy amounted at first (1931) to 2 groschen per litre, but later, in consequence of the further fall in butter prices, it was raised to 3 and then to 4 groschen. A part of the Milk Compensation Fund was also applied to the purpose of granting premiums on the export of butter, so as to maintain the level of butter prices within the country. The attempt of the dealers to enlarge their turnover by lowering the price of milk led, on account of the pressure on producers' prices, to the Order on Milk Prices of 13 May 1933, which fixed the price of milk by law. The result of this legal fixing of the price of milk was a considerable rise in the trading margin, which for fluid milk rose to 54 per cent. of the wholesale price. At that time there came into existence a number of small farmers who were making a profit in consequence of the large trading margin and whose activity further depressed the market of the existing large dairies which had been already affected by the crisis. The large number of dairies in the end tended to the maintenance of the trading margin at a high level, because it was feared that the lowering of the margin would mean working at a loss for many dairies, and there was a general desire to avoid this. In connection with the rise in the trading margin it has of course to be remembered that by the milk regulations of March 1931 compulsory pasteurisation was introduced, and accordingly the costs of processing increased.

The wholesale price in Vienna shown in the table on page 192 is not the producers' price, but the wholesale price for fluid milk paid by the dairies. From this are deducted at present 3 groschen per litre for the Milk Compensation Fund and 1 groschen for the Lower Austrian Milk Compensation Fund, or 4 groschen in all, which has to be paid by the farmer, so that for the producers there remains 26.5 groschen per litre of fluid milk. At present the farmer may deliver 64 per cent. of his milk output as milk for direct consumption, and must sell 36 per cent. as milk for dairy manufacturing purposes. For this latter type of milk he now obtains from the dairies only 18 groschen per litre, and from the Milk Compensation Fund a supplement of 4 groschen, so that his total price for manufacturing milk works out at 22 groschen per litre. Thus out of 100 litres of milk he sells:

64 litres as fluid milk at 26.5 gr.	16.96 sch.
36 litres as manufacturing milk at 22.0 gr.	7.92 "
100 litres in all	<u>24.88 sch.</u>

so that for milk delivered at the railway siding in Vienna he obtains on the average 24.88 groschen per litre. Out of that there has to be deducted 0.5 groschen per litre for cleaning the cans, 0.5 groschen for the milk stall and 0.5 to 2 groschen for transport, so that some 22 to 23.5 groschen net per litre of milk remain to the farmer. From 1 January 1937 the retail price of milk was lowered from 46-47 groschen per litre to 44-45 groschen. The lowering of the price was achieved exclusively at the expense of the trading margin and had no effect on the producers' price. The present margin of 14.5 groschen per litre is divided between the dairies (9 groschen) and the retail dealers (5 groschen). Exact information about the trading margin in the provinces is not available, but it is generally speaking lower than in Vienna; on the one hand, the producers' price is higher and, on the other, the retail price is somewhat lower, as appears from the table of the retail prices in the provinces given in the appendix.

(b) *Cheese*. — In the case of the type of cheese most important for consumption, namely, the half-Emmenthal cheese, the wholesale price declined, in consequence of the large surplus production in the country, from 4.39 schilling per kg. to 3.10, while the retail price fell from 5.27 to 3.60 schilling. Since at the same time the wholesale price for manufacturing milk fell, as has been shown, from 36.5 to 22 groschen per litre, a decline of 40 per cent., while there was only a 31 per cent. fall in the retail price of half-Emmenthal cheese, the size of the margin between the milk producer's price and that paid by the consumer of cheese has very considerably increased. The margin in the retail trade has somewhat declined.

(c) *Butter*. — The butter trade is controlled by a combination of large dealers. The price is artificially maintained at a high level by means of a reduction in supplies to the market, large quantities being exported. The difference between the low export prices (at times in 1934 the export price was 90 groschen per kg.) and the high prices on the national markets is covered from the Milk Compensation Fund. The marked decline in the retail margin is to be explained by the intervention of the Government, which practically eliminated direct sale by the producer to the retail dealer, which was formerly the determining factor in the wholesale price, so that the wholesale price is now represented only by the selling price of the large dealers and of the dairies to the retail traders. The retail selling price of butter declined from 1929 to 1936 from 6.48 schilling per kg. to 4.40, a decline of 32 per cent. This decline is thus of the same order as that of the retail price of half-Emmenthal cheese. Since the selling price of manufacturing milk, which is the standard price for the producer, also underwent over the same period a 40 per cent. decline, the result is also in this case a considerable widening of the spread between consumers' and producers' prices. Some modification, however, occurred in this margin. The retail trade margin fell from 1.35 schilling per kg. in 1929 to 40 groschen in 1936, or by 70 per cent., so that there was an increase in the margin between the producer's price (of manufacturing milk), which declined only by 31 per cent., and the wholesale price of butter. Assuming that for making one kilogramme of butter 25 litres of milk is required, the following is the development of the difference between

producers' price of milk and wholesale price of butter: The price of 25 litres of milk fell from 1929 to 1936 for the producers by 3.62 schilling; the wholesale price of butter over the same period, by only 1.13 schilling per kg. Even if the fall in the price of the cheese and other products made from skimmed milk is taken into consideration, there still remains as result a much smaller decline in the wholesale price of butter than in the producers' price for manufacturing milk.

A novelty for the butter market was introduced in the form of the so-called melted butter (*Butterschmalz*). In order to avoid the costly export of butter without depressing at the same time the price of butter on the home market, butter was melted down and the melted butter was sold cheaper as *Butterschmalz* for cook-

Years	Milk				Half-Emmental Cheese			
	Retail price	Wholesale price	Spread	Spread as percentage of wholesale price	Retail price	Wholesale price	Spread	Spread as percentage of wholesale price
	Gr. per litre	Gr. per litre	Gr. per litre	%	Gr. per kg.	Gr. per kg.	Gr. per kg.	%
1923	49	39.1	9.9	25	—	—	—	—
1924	52	38.6	13.4	35	—	—	—	—
1925	52	36.5	15.5	43	—	—	—	—
1926	52	36.5	15.5	43	—	—	—	—
1927	52	36.5	15.5	43	—	—	—	—
1928	52	36.5	15.5	43	—	—	—	—
1929	52	36.5	15.5	43	527	439	88	20
1930	54	36.2	17.8	49	494	419	75	18
1931	50	33.6	16.4	49	447	383	64	17
1932	47	33.0	14.0	42	436	384	52	14
1933	46	30.7	15.3	50	395	338	57	17
1934	47	30.5	16.5	54	359	308	51	17
1935	47	30.5	16.5	54	354	288	66	23
1936	47	30.5	16.5	54	360	310	55	18

Years	Butter				Eggs			
	Retail price	Wholesale price	Spread	Spread as percentage of wholesale price	Retail price	Wholesale price	Spread	Spread as percentage of wholesale price
	Gr. per kg.	Gr. per kg.	Gr. per kg.	%	Gr. each	Gr. each	Gr. each	%
1929	648	513	135	26	20	17.93	2.07	12
1930	610	456	154	34	17	14.34	2.66	19
1931	553	411	142	35	16	12.58	3.42	27
1932	538	408	130	32	15	12.67	2.33	18
1933	435	373	62	17	14	11.72	2.28	19
1934	450	394	56	14	13	11.01	1.99	18
1935	440	402	38	9	14	11.90	2.10	17
1936	440	402	40	10	14	11.94	2.06	17

king, first at the retail price of 3.20 schilling per kg. and now at 3.60 schilling. In this way 1 $\frac{1}{4}$ kg. of butter yielded, with loss of water, one kilogramme of this melted butter, so that the price of butter which was melted down for *Butterschmalz* amounted to 2.88 schilling per kg. retail. The price decline as compared with the retail price of fresh butter in 1929 amounted in this case to 3.60 schilling per kg., or 56 per cent. Thereby the margin between the average retail price of butter, including *Butterschmalz*, and the producers' price of milk was also reduced.

(d) *Eggs*. — Owing to the increase in home production egg prices underwent a severe decline after 1929; this did not however affect the retail trade margin, which has risen since 1929.

6. — Fruit and vegetables.

(a) *Fruit*. — Investigations of the trading spread in the case of fruit are subject to very wide yearly fluctuations which naturally also influence the margins. There are besides great differences in prices between the different kinds of any one fruit. The tracing of the spread for the various kinds over the whole period since 1929 is, for example in the case of pears, impracticable, since the price quotations in the returns of the Vienna Market Bureau often refer to different kinds from one year to another. Further, the quotations are frequently given at different times of the year in the separate years, so that owing to the considerable seasonal variations in price there are sources of error in constructing yearly averages. From the different kinds of pears five sorts of national origin were selected and the available data collected. In the case of the other kinds of fruit investigated (Styrian Maschanskaäpfel, indigenous nuts, apricots, cherries and plums) yearly quotations are given. Finally an arithmetical mean of the percentage spreads was constructed from the fruits investigated, with the exception of pears, and inserted in the tables as trading spread for fruit.

(b) *Vegetables*. — In general the same remarks hold good as for fruit. Those kinds of vegetables were selected which are handled by the trade throughout the year, thus eliminating certain sources of error in the material. A slight defect exists in the data supplied from the Market Bureau, which gives many prices only per piece.

Five kinds of vegetables were taken: cauliflowers, salad cucumbers, cabbage, cooking salad, spinach. From the percentage retail margins of these an average spread (arithmetical mean) was calculated also for vegetables.

7. — Potatoes.

In the Austrian economy potatoes are less important as human food than as stock feed, which is their predominant use. Only a fraction of the quantities of potatoes gathered reach the market as table potatoes. There are no available data on prices of fodder potatoes, so that it was possible to investigate the retail trade margin of table potatoes only. A considerable decline in this margin is to be noted as compared with that in the year 1929, as may be seen more precisely from the table.

Fruit.

Years	Retail price Gr. per kg.	Wholesale price Gr. per kg.	Spread Gr. per kg.	Spread as percentage of wholesale price %	Retail price Gr. per kg.	Wholesale price Gr. per kg.	Spread Gr. per kg.	Spread as percentage of wholesale price %
<i>Pears: Salzburg</i>					<i>Pears: Gute Luise</i>			
1929	82	56	24	41	112	80	32	40
1930	130	90	40	45	—	—	—	—
1931	60	35	25	71	90	60	30	50
1932	—	—	—	—	—	—	—	—
1933	—	—	—	—	—	—	—	—
1934	—	—	—	—	57	42	15	36
1935	—	—	—	—	97	79	18	23
1936	—	—	—	—	80	55	25	46
<i>Pears: Pastor</i>					<i>Pears: Colmar</i>			
1929	—	—	—	—	—	—	—	—
1930	—	—	—	—	—	—	—	—
1931	92	62	30	48	100	80	20	25
1932	113	83	30	36	85	52	33	64
1933	70	49	21	43	70	46	27	59
1934	72	54	18	33	50	35	15	43
1935	90	70	20	29	75	60	15	25
1936	67	50	17	43	55	35	20	57
<i>Pears: Plutzer</i>					<i>Apples: Styrian Maschanske</i>			
1929	—	—	—	—	102	78	24	31
1930	110	80	30	38	121	92	29	32
1931	65	40	25	63	107	79	28	35
1932	100	70	30	43	119	75	44	59
1933	—	—	—	—	72	50	22	44
1934	—	—	—	—	70	52	18	35
1935	—	—	—	—	68	53	15	28
1936	—	—	—	—	78	57	21	37
<i>Nuts: indigenous</i>					<i>Apricots</i>			
1929	210	160	50	31	240	185	55	30
1930	170	118	52	44	154	110	44	40
1931	148	107	41	38	160	130	40	31
1932	121	91	30	33	135	102	32	32
1933	188	157	31	20	130	95	35	37
1934	145	108	37	34	80	55	25	46
1935	130	102	28	38	141	115	27	24
1936	109	88	21	34	107	82	25	31
<i>Cherries</i>					<i>Plums</i>			
1929	155	118	37	31	68	48	20	42
1930	135	95	40	42	90	62	28	45
1931	102	68	34	50	70	45	25	56
1932	110	75	35	47	57	34	23	68
1933	101	71	30	42	55	35	20	57
1934	85	64	21	33	39	28	11	39
1935	150	120	30	25	41	30	11	37
1936	100	76	24	32	50	33	17	52

Vegetables.

Years	Retail price	Wholesale price	Spread	Spread as percentage of wholesale price	Retail price	Wholesale price	Spread	Spread as percentage of wholesale price
	Gr. per kg.	Gr. per kg.	Gr. per kg.	%	Gr. per kg.	Gr. per kg.	Gr. per kg.	%
<i>Cauliflowers.</i>					<i>Salad cucumbers.</i>			
1929	53	43	10	23	156	129	27	21
1930	72	52	20	39	101	73	28	38
1931	63	45	18	40	86	45	21	47
1932	62	45	17	38	101	66	35	53
1933	55	42	13	31	181	137	44	32
1934	54	40	14	35	95	73	22	30
1935	42	31	11	36	70	56	14	25
1936	55	43	12	28	80	60	20	33
<i>Cabbage</i>					<i>Cooking salad</i>			
1929	28	20	8	40	13	9	4	44
1930	23	15	8	53	13	8	5	63
1931	27	19	8	42	16	11	5	46
1932	19	13	6	46	13	9	4	44
1933	20	12	8	67	14	9	5	56
1934	19	11	8	73	11	7	4	57
1935	22	16	6	38	11	7	4	57
1936	18	12	6	50	12	7	5	71
<i>Spinach</i>								
1929	77	55	22	40	—	—	—	—
1930	60	38	22	58	—	—	—	—
1931	8	55	27	49	—	—	—	—
1932	75	53	22	42	—	—	—	—
1933	45	28	17	61	—	—	—	—
1934	35	25	10	40	—	—	—	—
1935	68	52	16	31	—	—	—	—
1936	78	58	20	35	—	—	—	—

Retail Trade Margin, as Percentage of Wholesale Price.

Years	Fruit	Vegetables
1929	33	34
1930	41	50
1931	42	45
1932	48	45
1933	40	49
1934	37	47
1935	28	37
1936	00	43

Table Potatoes.

Years	Retail price Gr. per kg.	Wholesale price Gr. per kg.	Spread Gr. per kg.	Spread as percentage of wholesale price %
1929	26	14	12	86
1930	21	13	8	62
1931	24	14	10	71
1932	21	13	8	62
1933	19	11	8	73
1934	20	13	7	54
1935	21	15	6	40
1936	18	12	6	50

8. — Sugar.

The price of sugar in Austria is fixed by the sugar cartel. Owing to various measures arising out of the customs and taxation policies there was a considerable rise in the price of sugar after 1926. Beet prices, on the contrary, were kept fairly constant. At the end of 1928 the price of sugar beet was 4.80 schilling per kg., and the beet growers received a subsidy from the proceeds of the sugar tax, making their receipts up to this price.

The various measures dictated by the customs and taxation policies are very complicated, but they must be briefly described here since they affect the margin between producers' price for sugar beet and consumers' price for sugar, in so far as a proportion of the proceeds of the tax was placed at the disposal of the sugar producers.

On 13 December 1928 the duty and the consumers' tax were both raised by 6 gold crowns, the duty from 22 to 28 gold crowns and the consumers' tax from 10 to 16 gold crowns. The proceeds from the increased receipts were made available for the sugar factories.

The raising of the tax is explained by the fact that a raising of customs dues was, by agreement with Czechoslovakia, bound up with a corresponding rise in the rate of taxation; accordingly, after a decision to raise the duty it was necessary also to raise the tax, the proceeds of the increase in the tax being, however, immediately returned to the sugar industry. On 20 December 1929 a proposal was made for a further increase of the duty and of the tax by 6 gold crowns, and again the receipts from the increased tax were made available for the national industry and for beet growing. It has not been easy to ascertain in what proportion the amount realised was shared between the sugar industry and the beet growers, but it is stated that 60 per cent. went to the growers and 40 per cent. to the industry. Later still further increases in the duty and in the tax were made, so that the consumers' tax rose to 31 gold crowns. On 9 June 1933 the consumers' tax in connection with the valorisation of the duty was fixed at 35 schilling. According to data available, however, the receipts do not now pass to the sugar industry.

The present price of sugar is governed by the sugar cartel. An analysis of the ruling sugar price according to the various cost items, which also shows the

distribution of the difference between beet price and consumers' price, is given as follows:

Crystallised Sugar, Prices in Schilling per 100 kg.

	Schilling	Percentage of retail price %
Beets (taking 100 kg as yielding 14.5 kg. sugar) .	34.48	26.93
Processing margin	34.22	26.74
Price ex factory	68.70	
Tax	35.00	27.34
Tax on commodity sales with crisis supplement .	8.40	6.56
Freight and crisis supplement	3.65	2.85
Carriage paid at Vienna	115.75	
Wholesale trade margin	3.50	2.73
Ex store Vienna, wholesale	119.25	
Retail trade margin.	8.75	6.84
Retail price, Vienna	128.00	100.00

Trade Margins for Sugar in Schilling per 100 kg. of Cube Sugar.

Years	Wholesale price carriage paid Vienna Sch. per 100 kg.	Wholesale price ex store Vienna Sch. per 100 kg.	Wholesale margin Sch. per 100 kg.	Wholesale margin as percentage of the wholesale price, carriage paid Vienna %	Retail price in Vienna Sch. per 100 kg.	Retail margin Sch. per 100 kg.	Retail margin as percentage of the wholesale price free Vienna %
1929.	85.23	87.42	2.19	2.57	92	4.58	5.24
1930.	96.94	98.46	1.52	1.57	105	6.54	6.64
1931.	113.35	115.02	1.67	1.47	119	3.92	3.46
1932.	117.08	120.46	3.38	2.89	124	3.54	2.94
1933.	121.31	125.06	3.75	3.09	127	1.94	1.55
1934.	121.50	125.25	3.75	3.09	132	6.75	5.39
1935.	—	—	—	—	—	—	—
1936.	—	—	—	—	—	—	—

The retail trade prices in the provinces show very marked deviations from the Vienna retail price. The price at Bregenz is 20 sch. per 100 kg. higher than in Vienna. As the extra charge made by the wholesale trade for the carriage from Vienna to Bregenz is only 9.25 schilling per 100 kg., the retail trade margin in Bregenz must be decidedly higher than in Vienna. In November 1933 the retail price for sugar was raised 4 groschen per kg. (crystallised sugar to 1.28, cube sugar to 1.32 sh. per kg.) and the retail trade margin in this way considerably increased. On the other hand the price reduction made in January 1937 was made partly on the costs of the retail trade margin. The price was lowered by 6 groschen per kg., of which one groschen went to the reduction of the retail trade margin and the remaining five groschen fell on industry and the growers.

The price of beet is now about 5 sch. per 100 kg. in accordance with an agreement of the beet growers' union with the sugar factories, which runs till 1939. The price has already stood for some time at that height. The sum of 5 schilling is the result of a somewhat complicated calculation: for 300 kg. of beet the grower receives the equivalent of 6 kg. of crystallised sugar untaxed ex factory (6 kg. at 0.68 sch., i.e., 4.08 sch.). From a joint fund of the beet growers and the sugar factories the grower receives after the lapse of a year a sum making up the price to the already mentioned 5 sch. per 100 kg. of beet.

Finally it must be recognised that the price rise due to the tax represents also a rise in the earnings of all concerned such that the profitableness of beet growing is satisfactory, while the consumer has to assume certain burdens.

9. — Wine.

Austrian wine prices show a considerable decrease as compared with both 1923 and 1929. The wholesale trade margin (the difference between the pro-

Cheapest Kinds of Wine.

Years	I Producers' price Sch. per hl.	II Wholesale price Sch. per hl.	III Spread between producers' and wholesale prices Sch. per hl.	IV III as percent- age of producers' price %	V Retail price Sch. per hl.	VI Spread between wholesale and retail prices Sch. per hl.	VII VI as percent- age of wholesale price %	VIII Spread between retail and producers' price Sch. per hl.	IX VIII as percent- age of producers' price %
1923. . . .	60	90	30	50	160	70	78	100	167
1924. . . .	70	120	50	71	180	60	50	110	157
1925. . . .	90	140	50	56	200	60	43	110	122
1926. . . .	80	130	50	63	200	70	54	120	150
1927. . . .	85	150	65	76	200	50	33	115	135
1928. . . .	75	145	70	93	180	35	24	105	140
1929. . . .	80	150	70	88	180	30	20	100	125
1930. . . .	50	115	65	130	160	45	39	110	220
1931. . . .	40	80	40	100	160	80	100	120	300
1932. . . .	40	70	30	75	160	90	129	120	300
1933. . . .	40	90	50	125	160	70	78	120	300
1934. . . .	50	100	50	100	180	80	80	130	260
1935. . . .	40	90	50	125	140	50	56	100	250
1936. . . .	35	80	45	129	120	40	50	85	243

Wines of Medium Quality.

1923. . . .	85	120	35	41	220	100	83	135	159
1924. . . .	115	150	35	30	950	100	67	135	117
1925. . . .	145	180	35	24	280	100	56	135	93
1926. . . .	140	175	35	25	280	105	60	140	100
1927. . . .	143	185	42	29	280	95	51	137	96
1928. . . .	148	193	45	30	250	57	30	102	69
1929. . . .	165	215	50	43	270	55	26	105	64
1930. . . .	125	178	53	64	220	42	24	95	76
1931. . . .	120	140	20	17	230	90	64	110	92
1932. . . .	110	135	25	23	220	85	63	110	100
1933. . . .	100	135	35	35	240	105	78	140	140
1934. . . .	125	150	25	20	250	100	67	125	100
1935. . . .	95	135	40	42	210	75	56	115	121
1936. . . .	83	110	27	33	180	70	64	97	117

ducers' price and the wholesale price and also the retail trade margin have been reduced for the cheaper qualities of wine in comparison with 1923 and with 1929, while the retail trade margin has become larger for the medium qualities as compared with 1929.

Appendix.

RETAIL PRICES OF FOODSTUFFS IN THE PROVINCES ON 1 JANUARY 1935. (in groschen per kilogramme).

Town	Flour	Bread	Pigmeat	Beef	Milk	Butter	Potatoes	Sugar
Vienna	70	61	300	280	47	440	18	132
Baden	70	60	220	230	47	440	20	133
Krems	69	50	275	300	42	350	12	135
Mödling	75	66	410	340	47	500	18	120
Neunkirchen	72	56	300	280	44	540	18	134
St. Pölten	69	60	260	260	40	360	14	135
Wr. Neustadt	70	56	300	340	44	400	20	134
Linz	69	64	320	270	42	460	15	139
Steyr	76	58	270	295	37	340	16	138
Wels	76	63	240	230	38	300	14	138
Salzburg	78	69	360	320	40	400	20	144
Graz	78	64	280	260	42	400	15	139
Bruck a/M.	68	65	260	220	36	400	16	140
Leoben	70	62	340	280	38	450	18	140
Klagenfurt	80	67	300	280	44	480	13	147
Villach	82	67	240	240	44	420	20	147
Innsbruck	90	74	260	260	42	500	15	149
Bregenz	90	65	300	340	36	460	22	152
Dornbirn	88	75	300	320	36	480	18	152

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THE SOCIAL INCOME FOR THE YEAR 1932-33, AND THE CHANGES IN IT BETWEEN 1931-32 AND 1932-33, FOR PREDOM- INANTLY ARABLE FARMS IN CERTAIN EUROPEAN COUNTRIES: SOISSONNAIS (FRANCE), OVERIJSEL (NETHERLANDS), GERMANY, SWEDEN, SWITZERLAND, AUSTRIA, HUNGARY, ROMANIA.

SUMMARY: The social income for 1932-33 in Soissonais (France), Overijssel (Netherlands), Germany, Sweden, Switzerland, Austria, Hungary, Romania, with tables showing the difference between figures for 1931-32 and those for 1932-33 for social income, gross return, and farm expenses for predominantly arable farms. — Summing-up.

There appeared in the May issue of the *Monthly Bulletin of Agricultural Economics and Sociology* an article on the accountancy results in 1932-33, with particular reference to the social income, of farms mainly devoted to animal husbandry in many different parts of Europe; in the present article we treat of the social income in 1932-33 of predominantly arable farms in certain European countries.

We will begin by studying the farms in the Soissons district of France.

A. — In Soissonais (France).

The general characteristics of the farms remained the same; they all belonged to the same fairly homogeneous region of Soissonais, which lies between the Aisne and the Oise. Useful comparison can, therefore, be made between the figures for the 75 farms in 1932-33 and the 58 farms in the previous year.

"The intensive cultivation of wheat and of industrial crops is," says M. Jean Reynault (1), "induced by the quality and quantity of the soil of this region, which is densely populated and near to the large urban and industrial centres. The relatively high cost of land and the large agricultural output needed to meet the demands of the population lead necessarily to intensive cultivation. The soil of the region is, moreover, not only suitable for cereal production but is one of the best for the production of beet; and, as it is well known by all farmers that the growing of a beet crop is an excellent preparation of the soil for a cereal crop, intensive cultivation of sugar-beet is naturally found in this district. The soil of the Soissons district is particularly suitable to this because, on top of coarse limestone, there is a layer 10 to 12 metres deep of silt of the kind that is found on plateaux, a silt free of stones and composed of fine sand and clay, which, as M. Hittier says, is an ideal soil for arable production. The three crops that are successively grown on the same land are wheat, oats, and beet; in principle therefore, there is a three-course rotation. The farms in this district are heavily staffed; they have a large number of live stock—fatted bullocks, pigs, sheep—but these are of secondary importance; and they produce poultry products. Intensive cultivation requires a large amount of capital, heavy expenses (as can be seen from the figures in the tables), and considerable equipment; such cultivation makes the farm like a large factory."

The social income, which fell by 23 per cent. between 1929-30 and 1931-32, rose 16 per cent. between 1931-32 and 1932-33; gross returns rose and the outlay on fodder, fertiliser and seed fell considerably; and as wage costs also fell the income of the farmer for 1932-33 was double that for 1931-32.

B. — In Overijssel (Netherlands).

Here there are two very different groups of farms. The first group is composed of the cereal-growing farms of the marshy districts, which yield a high gross return; and the second consists of the arable-stock farms in the sand and peat districts, where movement is hampered, and these give only a low return. However, the fall in the gross return between 1931 and 1932 was less for the farms in the second group than for those of the first group. The reason for this is that the arable-stock farms have concentrated more on animal husbandry increasing considerably the production of cattle and pigs.

(1) JEAN REYNAULT. Etude sur un prix de revient agricole: la betterave sucrière en France, plus spécialement dans la région parisienne. Paris, 1936.

Gross Return: Quantities per Hectare.

	Cattle (kg. of live weight)		Milk (kg.)		Pigs (kg. of live weight)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Arable-stock farms in the sand and peat districts	4.7	15	1,686	1,500	118	170
Farms in the marshy districts	—	14	208	274	22	31

The total gross return of cereal-growing farms situated in the marshy districts fell considerably by reason of the decline in the prices of cereals; on the average these prices fell by 10 per cent.

The social income from the arable-stock farms of the sand and peat districts fell to a very low level in 1931-32 but rose 100 per cent. between 1931-32 and 1932-1933; it is still, however, far below the social income from the arable farms of the marshy districts. The social income from these cereal-growing farms fell slightly between 1931-32 and 1932-33 but is still near to its 1929-30 level. Here are figures for the social income, expressed in florins, from these two groups of farms.

	Social income in 1929-30 florins	Social income in 1932-33 florins
Arable-stock farms in the sand and peat districts	232.42	67.90
Arable farms in the marshy districts	183.57	172.68

The part of the social income that goes to the farmer is much greater in the marshy districts than in the sand and peat districts; it rose in both regions between 1931-32 and 1932-33.

C. — In Germany.

The aim of the Government has been to close the German market to foreign cereals and to increase the quantities of home grown-cereals used for live stock feed. The proportion of home-grown flour to be used in bread-making has been fixed at 97 per cent. These and other measures have not prevented the prices of cereals from weakening to the same extent as the prices of animal products:

Prices of Agricultural Products, in Marks per Quintal.

	1931-32	1932-33	Percentage decrease
Wheat	23.64	20.03	15
Rye	19.02	15.77	17
Barley	16.35	16.77	—
Oats	15.07	13.25	12
Potatoes	3.57	2.67	25
Fresh milk	15.06	13.84	8
Butter	245.35	212.92	13
Cheese	180.10	153 —	15
Bullocks	76.06	64.42	15
Pigs	87.75	77.40	12

TABLE I.—*The Social Income, the Gross Return, and the Farm Expenses for the year 1932-33 for*
(Social income for

GROUP	Number of farms	Average area in hectares	Animal production				Vegetable products	Other branches	
			Cattle		Pigs	Other animals			
			Breeding for slaughter and other purposes	Milk and dairy products					
			1	2					3	4	5	6
Soissonais (France):									
Farms growing crops for industrial use .	1931-32	58	290 —	2 —	2.08	0.71	2.34	156.86	7.50
	1932-33	75	290 —	3.27	2.73	1.26	3.95	161.82	2.15
Overijssel (Netherlands):									
Sandy, peaty, dis- tricts	1931-32	54	14.88	0.78	37.37	17.98	11.45	6.31	—
	1932-33	71	15.12	3.85	32.02	22.20	8.45	4.66	—
Marshy districts . .	1931-32	10	26.40	—	5.83	4.28	12.09	153.40	—
	1932-33	11	25.73	4.67	7.40	5.08	5.64	116.51	—
Gerinany:									
Cereal producing farms:									
West and South:									
5 to 20 hectares .	1931-32	233	14 —	14.71	20.42	19.22	3.90	38.74	40.84
	1932-33	226	14 —	12.01	18.32	16.52	3.90	40.24	39.04
20 to 100 hecta- res	1931-32	527	43 —	10.88	24.47	12.99	2.72	55.59	29 —
	1932-33	631	44 —	8.46	22.05	10.57	2.42	61.33	28.70
Over 100 hectares	1931-32	107	191 —	7.69	22.12	8.01	3.52	78.21	20.19
	1932-33	117	174 —	5.13	20.19	8.33	3.21	86.86	23.08
East:									
5 to 20 hectares .	1931-32	280	30 —	12.72	15.64	16 —	2.91	36 —	36.73
	1932-33	657	26 —	7.64	11.27	14.18	2.18	30.91	41.09
20 to 100 hecta- res	1931-32	255	105 —	9.61	20.52	9.17	1.31	59.83	29.69
	1932-33	354	100 —	6.55	16.16	10.04	1.75	61.57	30.57
Over 100 hectares	1931-32	287	414 —	6.84	14.10	8.12	3.85	67.52	28.63
	1932-33	383	403 —	5.13	13.25	9.40	3.42	77.78	28.20
Sugar beet farms:									
West and South:									
5 to 20 hectares .	1931-32	64	15 —	6.62	18.95	9.36	3.20	66.21	28.54
	1932-33	64	15 —	6.62	16.67	7.99	3.20	71 —	25.57
20 to 100 hecta- res	1931-32	240	51 —	7.01	21.50	7.71	1.17	81.77	19.86
	1932-33	231	51 —	5.84	20.33	8.41	1.87	82.94	20.56
Over 100 hectares.	1931-32	106	187 —	3.96	17.02	3.96	3.96	100.23	14.92
	1932-33	99	184 —	3.03	16.79	5.36	3.03	97.90	16.78
East:									
5 to 50 hectares .	1931-32	23	31 —	10.95	21.14	13.43	1.24	51.99	22.64
	1932-33	22	32 —	8.71	18.90	12.19	1.49	49.25	20.90
50 to 200 hecta- res	1931-32	74	137 —	8.52	20.33	6.04	0.83	83.24	19.78
	1932-33	67	125 —	6.59	17.31	6.87	0.82	83.24	19.23
Over 200 hectares	1931-32	86	362 —	7.85	15.41	5.81	2.32	84.30	19.48
	1932-33	68	332 —	5.81	14.24	6.10	2.62	85.76	19.48

Farms situated in various European Countries and concerned mainly with Vegetable Production.
1928-29 = 100)

Total gross return	Working costs		Social income									Social income 1928-29 in na- tional currency
	Seeds, fodder, fertilisers	Other expenses	Social income (total)	Income going to third persons				Operator's income				
				Taxes	Interest on debts	Wages of hired labour	Total	Remun- eration of family labour	Family capital return	Total		
7	8	9	10	11	12	13	14	15	16	17	18	
171.49 175.18	52.56 39.69	41.76 41.88	77.17 93.61	3.49 3.52	-- —	54.77 50.99	58.26 54.51	11.76 11.76	7.15 27.34	18.91 39.10	(1) (1701.06) —	
73.89 71.18 175.60 139.30	44.01 32.55 60.30 36.93	15.41 9.37 19.31 8.31	14.47 29.26 95.99 94.06	2.01 2.17 2.40 2.70	1.89 1.68 20.81 21.15	19.35 18.88 51.99 42.32	23.25 22.73 75.20 66.17	38.73 39.20 21.55 31.22	— — — —	47.51 32.67 0.76 3.33	8.78 6.53 20.79 27.89	(232.42) — 1(183.57) —
137.83 130.03	22.82 20.42	41.44 37.24	73.57 72.37	6.01 6 —	11.71 9.01	21.02 19.22	38.74 34.23	53.15 48.05	— —	18.32 9.91	34.83 38.14	(333 —) —
135.65 133.53 139.74 146.80	24.77 24.77 24.04 27.88	36.87 34.44 39.42 36.22	74.01 74.32 76.28 82.70	7.85 7.55 8.01 7.69	13.60 10.58 20.83 16.03	43.50 40.18 59.62 54.49	64.95 58.31 88.46 78.21	18.13 17.22 5.45 6.09	— — — —	9.07 1.21 17.63 1.60	9.06 16.01 12.18 4.49	(331 —) — (312 —) —
120 — 107.27	14.91 12.73	34.54 28 —	70.55 66.54	5.46 4.36	16.36 15.64	32 — 23.27	53.82 43.27	31.27 35.64	— —	14.54 12.37	16.73 23.27	(275 —) —
130.13 126.64 129.06 137.18	21.83 22.27 24.30 27.78	35.81 34.93 34.62 33.76	72.49 69.44 70.08 75.64	6.99 6.11 8.12 6.84	23.58 20.09 22.65 21.36	52.84 47.60 61.96 58.12	83.41 73.80 92.73 86.32	10.48 10.92 3.42 3.42	— — — —	21.40 15.28 26.07 14.10	10.92 4.36 22.65 10.68	(229 —) — (234 —) —
132.88 131.05	20.78 22.15	32.19 32.42	79.91 76.48	7.99 7.76	11.88 11.87	22.83 20.32	42.70 39.95	29.45 27.85	7.76 8.68	37.21 36.53	(438 —) —	
139.02 139.95 144.05 142.89	25.47 27.80 24.48 27.51	32.94 31.78 35.43 31 —	80.61 80.37 84.14 84.38	8.88 8.41 9.09 8.63	13.32 12.38 18.88 15.15	44.63 40.89 52.21 48.25	66.83 61.68 80.18 72.03	10.28 10.51 3.73 3.73	3.50 8.18 0.23 8.62	13.78 18.69 3.96 12.35	(428 —) — (429 —) —	
121.39 111.44	20.15 19.90	31.34 32.09	69.90 59.45	5.72 5.72	14.93 9.95	31.59 29.60	52.24 45.27	18.16 21.89	— —	0.50 7.71	17.66 14.18	(402 —) —
138.74 134.06 135.17 134.01	24.73 26.92 23.55 25 —	34.07 32.42 34.30 32.56	79.94 74.72 77.32 76.45	7.69 6.32 7.85 6.98	16.76 16.21 21.51 15.99	53.57 47.52 57.85 52.90	78.02 70.05 87.21 75.87	3.85 4.67 1.74 2.03	— — — —	1.93 4.67 11.63 1.45	1.92 4.67 9.89 0.58	(364 —) — (344 —) —

GROUP	Number of farms	Average area in hectares	Animal production				Vegetable products	Other branches	
			Cattle		Pigs	Other animals			
			Breeding for slaughter and other purposes	Milk and dairy products					
									1	2	3	4	5	6
Sweden:									
Centre:									
Farms under 50 hectares	1931-32	215	12.66	15.32	58.35	17.14	18.77	22.01	13.48
	1932-33	206	13.19	13.22	50.12	20.06	17.09	27.39	12.96
Farms over 50 hect.	1931-32	89	187.64	18.34	66.31	6.06	11.56	31.25	13.09
	1932-33	78	190.42	13.04	55.92	7.53	10.58	50.87	11.68
South:									
Farms under 50 hectares	1931-32	23	27.56	6.44	36.31	15.06	17.87	69.89	5.46
	1932-33	35	29.48	5.20	38.01	18.61	6.45	91.42	4.80
Farms over 50 hect.	1931-32	42	205.45	11.92	53.06	11.41	4.77	62.19	6.16
	1932-33	45	200.82	9.79	44.80	13.70	4.53	80.61	5.57
Switzerland:									
Farms with im- proved 3 year rotation	1931-32	103	13.64	32.52	43.95	11.96	5.78	40.45	18.41
	1932-33	92	12.86	21.23	41.66	9.41	5.65	37.36	20.02
Austria:									
Arable-stock farms with alpine pasture	1931-32	20	20.97	10.54	47.65	23.37	4.51	20.19	22.10
	1931-32	22	21.54	16.53	42.34	23.15	6.88	22.75	16.53
Arable-stock farms without alpine pasture	1931-32	340	26.84	10.99	26.13	27.36	4.80	25.54	22.23
	1932-33	277	27.47	13.53	25.08	31.54	5.86	26.09	13.81
		163	18.48	7.11	23.92	26.46	4.65	36.45	16.35
		145	18.95	11.61	24.24	29.13	5.61	49.64	12.92
Hungary:									
Small Transdanub- ian farms:									
Farms in all parts of the country, small	1931-32	60	14.21	6.56	9.11	13.63	9.68	41.04	9.70
	1932-33	24	20.55	5.19	7.89	22.84	7.67	50.24	10.50
Farms in all parts of the country, medium	1932-33	75	304.95	3.27	8.09	8.29	2.55	49.70	10.07
Farms in all parts of the country, large	1932-33	50	2003.43	4.47	9.37	10.33	2.09	53.88	10.14
Romania:									
Farms in all parts of the country .	1931-32	55	8.92	6.52	13.25	11.32	12.97	84.90	22.70
Arable farms in Muntenia and Altenia	1932-33	68	7.67	3.99	4.82	10.35	15.92	88.09	39.10
Arable farms in Moldavia	1932-33	17	11.29	4.31	3.75	4.94	8.29	38.71	9.64
Arable farms in Bucarest	1932-33	10	6.65	16.83	5.37	11.81	21.21	178.27	32.15

Total gross return	Working costs		Social income								Social income 1928-29 in national currency
	Seeds, fodder, fertilisers	Other expenses	Social income (total)	Income going to third persons				Operator's income			
				Taxes	Interest on debts	Wages of hired labour	Total	Remuneration of family labour	Family capital return	Total	
7	8	9	10	11	12	13	14	15	16	17	18
145.07	35.43	31.51	78.13	—	—	22.49	22.49	56.58	— 0.94	55.64	(224.27)
140.84	30.10	30.25	80.49	—	—	17.32	17.32	55.97	7.20	63.17	—
146.61	33.75	46.11	66.75	—	—	73.39	73.39	2.82	9.46	6.64	(197—)
149.62	27.02	42.95	79.65	—	—	68.52	68.52	2.74	8.39	11.13	—
151.03	43.29	29.88	77.86	—	—	43.22	43.22	14.61	20.03	34.64	(354—)
165.39	44.17	30.21	91.01	—	—	41.34	41.34	13.17	36.50	49.67	—
149.51	44.29	35.07	70.15	—	—	60.56	60.56	3.76	5.83	9.59	(262—)
159—	35.02	34.10	89.88	—	—	59.66	59.66	3.16	27.06	30.22	—
153.07	19.62	45.83	87.62	4.03	50.80	54.83	32.79	32.79	744.12	—	—
135.33	18.14	50.40	66.79	3.90	43.14	47.04	19.75	19.75	—	—	—
128.36	22.91	31.11	74.34	5.46	3.86	19.12	28.44	46.53	— 0.63	45.90	(388.53)
128.18	19.26	32.62	76.30	4.69	6.61	25.51	36.81	37.64	1.85	39.49	—
117.05	14.38	33.67	69—	4.69	5.03	32.31	42.03	31.47	— 4.50	26.97	(273.28)
115.91	14.81	29.58	71.52	5.26	4.85	29.67	39.78	28.53	3.21	31.74	—
114.94	16.59	31.57	66.78	5.50	5.59	23.60	34.69	38.17	— 6.08	32.09	(473—)
133.15	19.20	31.63	82.32	6.41	5.42	26.90	38.73	34.32	9.27	43.59	—
89.78	5.92	33.05	50.81	8.62	6.61	13.58	28.81	44.87	— 22.87	22—	(1)
104.39	12.27	35.35	56.77	10.73	4.67	22.11	37.51	30.38	— 11.12	19.26	(254.14)
81.97	7.87	31.34	42.76	7.09	5.50	33.85	46.44	2.71	— 6.39	3.68	—
90.28	10.73	27.92	51.63	7—	3.71	39.04	49.75	0.42	— 1.46	1.88	—
151.66	6.55	41.35	103.76	7.40	5.48	9.93	22.81	31.09	— 49.86	80.95	(2)
162.27	1.42	32.31	128.54	5.57	1.74	12.32	19.63	24.57	— 84.34	108.91	(2531.60)
69.64	0.87	15.41	53.36	2.33	1.22	1.98	5.53	16.87	— 30.96	47.83	—
265.64	4.26	39.62	221.76	19.16	26.47	24.29	69.92	30.89	— 120.95	151.84	—

The fall of prices has had results varying according to the district and to the size and type of farm. Consider firstly *cereal-growing farms*. The gross return was a little lower in 1932-33 than in 1931-32 except in the case of farms of more than 100 hectares situated in the West and farms of more than 200 hectares in the East; the reason for the exceptions is that in these cases the output of pigs, and above all of vegetable products increased considerably.

Gross Return: Quantities per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)			Cereals (quintals)			Potatoes (quintals)		
	1931- 1932	1932- 1933	1931- 1932	1932- 1933	1931- 1932	1932- 1933	increase (+) or decrease (-)	1931- 1932	1932- 1933	increase (+) or decrease (-)	1931- 1932	1932- 1933	increase (+) or decrease (-)
Cereal-growing farms:													
West and South:													
5 to 20 ha. . .	64	62	459	441	72	71	— 1	5.00	6.40	+ 28	3.36	3.75	+ 12
20 to 100 ha. . .	47	43	546	527	49	45	— 8	6.91	9.45	+ 37	3.08	3.75	+ 22
Over 100 ha. . .	32	25	465	455	28	34	+ 21	8.00	12.50	+ 56	3.92	4.50	+ 16
East:													
5 to 20 ha. . .	46	33	290	224	50	50	—	4.10	4.08	— 1	1.40	1.50	+ 7
20 to 100 ha. . .	29	23	317	267	24	30	+ 25	5.61	6.77	+ 21	3.36	4.12	+ 23
Over 200 ha. . .	21	19	223	224	21	28	+ 33	6.31	8.54	+ 35	3.35	5.24	+ 56

The prices of agricultural requisites fell less than the prices of agricultural products, so that working expenses were almost as high as they were in 1931-1932. The cause of the rise between 1931-32 and 1932-33 in the social income from Western farms of over 100 hectares and from Eastern farms of over 200 hectares is to be found in the considerable increase in gross return.

The charges for interest on debts and the cost of labour fell considerably between 1931-32 and 1932-33, and as a consequence the return on the farmer's capital invested in the farm rose; this rise incidentally gave the farmer a higher income.

Let us now consider *sugar-beet farms*.

The gross return fell between 1931-32 and 1932-33. In the case of farms of 20 to 100 hectares situated in the West the gross return was just maintained at the 1931-32 level. This was due primarily to the profit which this group of farms drew from sugar-beet production, for the output of cereals and potatoes, and the production of pigs, was greater in the case of farms of 100 hectares, whose gross return in marks fell.

For the same reason the gross return in marks on farms in the East with an area of more than 200 hectares fell less than the gross return from farms in the same region with an area of from 5 to 50 and from 50 to 200 hectares. In all three groups of Eastern farms the changes in the working costs were insignificant, so that changes in the social income depend on changes in the gross return.

Gross Return: Quantities per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)			Cereals (quintals)			Potatoes (quintals)		
	1931	1932	1931	1932	1931	1932	increase (+) or decrease (-)	1931	1932	increase (+) or decrease (-)	1931	1932	increase (+) or decrease (-)
	1932	1933	1932	1933	1932	1933		1932	1933		1932	1933	
Sugar-beet farms:													
West and South:													
5 to 20 ha. . .	38	45	560	527	46	45	— 2	7.27	10.55	+ 45	6.99	6.74	— 4
20 to 100 ha. .	39	39	620	629	37	49	+ 24	9.06	12.68	+ 31	5.66	5.62	— 6
over 100 ha. .	22	20	492	520	19	30	+ 58	10.94	15.30	+ 40	4.75	6.37	+ 34
East:													
5 to 50 ha. . .	58	54	573	549	61	63	+ 3	6.23	7.01	+ 13	2.80	2.62	— 6
50 to 200 ha. .	41	37	499	455	25	32	+ 28	8.27	10.30	+ 24	5.04	7.12	+ 41
over 200 ha. .	36	31	357	354	23	27	+ 17	8.47	10.55	+ 24	5.87	4.87	— 17

In fact the social income from Eastern farms of over 200 hectares was, like the gross return, almost as high in 1932-33 as it was in the previous year.

Working costs rose considerably for Western farms of 5 to 20 hectares, and rose slightly for Western farms of 20 to 100 hectares; on the other hand, working costs were very slightly reduced for farms of over 200 hectares in the same region. The indirect consequence was that the social income fell considerably in the case of farms of from 5 to 20 hectares, and fell very slightly in the case of farms of from 20 to 100 hectares, the gross return from which was, as we have already said, about the same in 1932-33 as in 1931-32; the social income from farms of more than 100 hectares remained firm during this period.

The return on farmer's capital and the operator's income rose in the case of sugar-beet growing farms in both Eastern and Western Germany for reasons set forth in the analysis of cereal-growing farms; exception must be made for farms of 5 to 50 hectares in Eastern Germany whose gross return fell to a greater extent than did the farm expenses plus the costs of interest on debts..

D. — In Sweden.

The prices of agricultural products fell between 1931-32 and 1932-33, with the exception of the prices of pigs, sugar-beet, and peas, which rose.

In Central and Southern Sweden the yields per hectare were very heavy in 1932-33.

In the South the size of the gross return depends in the first place on vegetable production, as the figures in Table I show. Animal production in the South was also higher than in other regions, but this is of secondary importance (the farther North a farm is the more preponderant is its animal production). The results for the various regions cannot be more closely compared because the size groups are not uniformly represented in the various regions of production,

Yields, in Quintals per Hectare.

	Wheat and rye		Other cereals		Sugar-beet	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Centre: Farms of less than 50 ha. . .	15.6	23.2	18.7	21	—	—
» Farms of more than 50 ha. . .	15.5	23.9	18	21	—	—
South: Farms of less than 50 ha. . .	25.4	28.8	26.2	28.8	28.4	405.8
» Farms of more than 50 ha. . .	22.6	30.5	26.7	29.8	260.3	389.1

and the size of the gross return varies greatly according to the size of the farm. The size of the farm also affects the composition of the gross return. The greater the size of the farm the greater is the output of vegetable products relatively to the output of animal products, and particularly to pig production.

Gross Return: Quantities per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)		Cereals (quintals)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Centre: Farms of less than 50 ha.	82	72	648	597	73	78	1.78	5.55
» Farms of more than 50 ha.	81	69	626	551	22	22	3.45	6.37
South: Farms of less than 50 ha.	52	50	620	689	97	101	9.36	10.80
» Farms of more than 50 ha.	69	69	694	587	63	55	8.02	10.28

Pig production was greater in 1932-33 than in 1931-32 on farms of less than 50 hectares in both the Centre and the South, but smaller on farms of more than 50 hectares. Southern farms of less than 50 hectares also produced more milk in the year 1932-33 and sold larger quantities of cereals and potatoes. The physical output of sugar-beet was greater on these farms than on those of an average area of more than 50 hectares. These smaller farms had in 1932-33 a gross return in crowns which was much greater than the gross return on farms of over 50 hectares in the same region; but the social income was greater on the larger farms, since farm expenses fell on these large farms, whereas on farms of less than 50 hectares they rose. In Central Sweden also, farms of more than 50 hectares yielded a greater social income than the smaller farms, whose gross return fell between 1931-32 and 1932-33.

E. — In Switzerland.

On farms which have retained the system called "the improved three-course rotation" there seems to have been a fall of animal production except in the case of pig production and dairy farming, which yielded a greater output than in 1931-32.

Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)		Cereals (1) (quintals)		Potatoes (quintals)	
1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
137	102	1,422	1,442	51	55	2 —	2.15	4.64	3.50

(1) Expressed in wheat equivalents.

The gross return on dairy farming and pig fattening was, however, reduced by the fall in the price of milk and of pigs. (They fell from 23.60 to 21.50 and from 174 to 127, respectively).

The gross return on cattle-breeding was reduced as a result of the fall in the price of slaughter cattle as well as of the fall in output; the gross return on vegetable production was also low by reason of the fall in prices. The total gross return in 1932-33 is therefore lower than it was in 1931-32; the social income also fell because the costs of paying off debts increased. The operator's income is also lower in 1932-33 than it was in 1931-32 since this income depends on the return on the operator's own capital, which was lowered by the fall in the gross return and the increase in farm expenses.

F. — In Austria.

Vegetable production and the fattening of pigs yielded in 1932-33 a gross return higher than that of 1931-32 by reason of the rise in the price of cereals (10 per cent.), of beef (4 per cent.), and of pork (5 per cent.). The rise in the price of pigmeat was sufficient to compensate for the considerable decrease in the output of pigmeat.

Gross Return: Quantities per Hectare.

	Cattle (kg. live weight)		Milk (kg.)		Pigs (kg. live weight)		Cereals (quintals)	
	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33	1931-32	1932-33
Arable-stock farms with alpine pasturage	17	26	545	499	61	39	0.70	0.79
Arable-stock farms without alpine pasturage	17	20	287	284	69	51	1.60	1.43
Arable farms	14	22	333	347	84	59	2.94	3.90

The cereal-growing farms alone succeeded in increasing in 1932-33 their gross return from dairy products; this increase was due to the fact that high physical returns increased the output of milk and dairy products by 4 per cent. which offset the effect of a fall in the price of milk. The total gross return on these farms increased between 1931-32 and 1932-33, while the gross return on arable-stock farms having alpine pasturage remained the same as in 1931-32, and the

gross return on arable-stock farms not having alpine pasturage fell considerably by reason of the fall in value of the dairy and other products.

The working costs fell sufficiently to cause an increase in the social income from farms in each group. From being negative, the return on the farmer's capital became positive; there was an increase in operator's income in all cases except that of the arable-stock farms having alpine pasturage in which case the cost of interest on debts and of hired labour were much higher in 1932-33 than they were in 1931-32.

G. — In Hungary.

The composition of the gross return differs little between the small, medium-sized and large farms. The medium-sized farms were the least remunerative in 1932-33 by reason of the lower return to arable farming and to pig-feeding. In this group of farms the operator made a loss since the total return was not large enough to cover the costs represented by taxes, interest on debts, and wages. The farmer who owned a large farm retained after paying all his expenses a sum which represented a slight return on his activities; the small farmer, on the other hand, received a third of the social income.

H. — In Romania.

The striking thing about the accountancy results of those Romanian farms which kept accounts is the lowness of the figures for purchases of fertilisers, feeding-stuffs, and seeds, for the interest on debts, and for wages of hired labour. In 1932-33 the operator's income was almost the same as the social income. It will be seen that here peasant families operate their farms using almost exclusively resources drawn from the land itself.

Summing-up.

The following figures indicate the size of the social income in 1931-32 from farms concerned predominantly with vegetable production:

In Austria	it amounted to	67-74 %	of that of	1928
In Sweden	"	67-78 %	"	1928
In Germany	"	70-85 %	"	1928
In Switzerland	"	88 %	"	1928
In Soissonnais (France)	"	77 %	"	1929
In Netherlands (Overijssel):				
(1) in the peaty, sandy, districts	"	14 %	"	1929
(2) in the marshy districts	"	95 %	"	1929
In Hungary (Transdanubia)	"	50 %	"	1929

The social income rose between 1931-32 and 1932-33 in Soissonnais (France), and in the Netherlands (Overijssel) for arable-stock farms situated in the sand and peat districts. In Germany it rose in the case of farms situated in the West and South, having an area of more than 20 hectares, and concerned with cereal-growing and also in the case of cereal farms situated in the East, having an area of more than 200 hectares. It also rose in Sweden, Austria, Hungary. The reason for this rise is to be found in the increase in gross return and the fall in working expenses.

The social income fell between 1931-32 and 1932-33 in the following cases: Germany, farms in the West and South having an area of 5 to 20 ha., cereal farms situated in the East having an area of 5 to 50 ha. and of 50 to 200 ha., and beet-sugar farms in every size group in the West and East; Netherlands (Overijssel), farms in the marshy district; and Switzerland. This fall was due to a decline of the gross return. It is also to be noted that during this period there was a rise in the working costs of farms in Switzerland, and of those German sugar-beet growing farms which are situated in the West and have an area of 5 to 20 ha. and of 20 to 100 ha.

In a future article we shall deal with farms situated in the following central European countries: Poland, Estonia, Latvia, Lithuania, Czechoslovakia.

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(1) Previous list March 1937. To be continued September 1937.

(2) List of abbreviations: bihebd. (biweekly); bimens. (twice monthly); bimestr. (every two months); déc. (every ten days); étr. (foreign price); fasc. (copy); hebd. (weekly); int. (home price); irr. (irregular); mens. (monthly); n° (number); N. S. (new series); p. a. (per annum); q. (daily); sem. (half yearly); s. (series); v. (volume); trim. (quarterly).

(3) Between brackets [/] are given translations and explanatory notes not appearing in the title of the review.

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INTERNATIONAL ORGANISATION OF THE TEA MARKET

SUMMARY: World tea production and trade up to the year 1929. — Agreement of 1930 concerning the restriction of tea production, and its effects. — Agreement of 1933 concerning the restriction of the exports and the production of tea. — Legislation of British India concerning the regulation of the export and the production of tea. — Measures adopted by the International Tea Committee and the effect of the Agreement of 1933 during the first three years of its application.

World tea production and trade up to the year 1929.

The world production of tea is nearly 2,000,000,000 lbs. per annum (1). The area under tea cultivation is approximately 4,000,000 acres. More than 4,000,000 workers are employed in the growing, harvesting, and handling of the product. Although precise figures are not available as to the proportion of the world production to be attributed to China, it must be little short of half. During the period 1928 to 1932 China accounted on the average for 48.9 per cent. of the world production, India for 22.3, per cent., Ceylon 13.4 per cent., Netherlands Indies 9.2 per cent., Japan 4.7 per cent., Formosa 1.2 per cent., other countries 0.3 per cent. Nearly one half of the total quantity grown is consumed in the producing countries, especially in China; the remainder is placed on the world market.

The international trade in tea had been during 1900, the year taken as starting point for this review of the subject, 605,801,000 lb.; during the four years which followed the yearly average was 624,842,000 lb. In the course of the years 1905-1908 a progressive increase was noted which continued during the subsequent period: the annual average from 1909 to 1913 was 769,328,000 lb. During the war the average was somewhat higher, reaching 857,972,000 lb. during the period 1914-1918. In the years following the war a setback was to be observed in world trade, due largely to the disorganisation of the markets, the lowered purchasing power, and the accumulation of stocks. The average during the period 1920-1924 was 723,249,000 lb. After 1924 a new tendency to increase appeared which reached its maximum in 1929.

The following is an account of the situation in that year (1929) in respect of exports on the one hand, and of the absorption of supplies on the other.

(1) The data contained in this article are mainly drawn from the following sources: Reports of the International Tea Committee; UKERS, *All about Tea*. New York 1935; HOUILLER, *L'Organisation Internationale d'Agriculture*. Paris 1935; *International Year-book of Agricultural Statistics*, International Institute of Agriculture, Rome; *Tea and Coffee*, Trade Journal, New York; *The Economist*, Commercial History of 1936. 13 February 1937.

The exports were 967,000,000 lb.; in this figure are included 382,900,000 lb. from India, 251,600,000 lb. from Ceylon, and 159,700,000 lb. from the Netherlands Indies. China comes next with 126,400,000 lb., then Japan with 23,700,000 lb., Formosa with 18,300,000, French Indo-China with 2,200,000 and Africa (taking the extra-African exports) with 2,200,000 lb. The world absorption of tea during 1929 was 912,700,000 lb. distributed as follows among the countries of most importance in this respect: Great Britain 425,000,000, lb. Netherlands 23,900,000 lb., Russia 63,000,000 lb., Irish Free State 23,600,000 lb., Germany 12,700,000 lb.; United States of America, 88,200,000 lb., Canada 38,000,000 lb., Iran 16,200,000 lb., Malaysia 10,200,000 lb., French Morocco 16,400,000 lb., Egypt 12,800,000 lb., South Africa 11,400,000 lb., Australia 48,900,000 lb., New Zealand 12,000,000 lb. By the phrase absorption is here understood the deliveries from bonded warehouses in Great Britain and Northern Ireland and the net imports in the other countries. In the above figure concerning the world absorption of tea are included 26,100,000 lb. imported by the producing countries.

During the years 1928-1929 large stocks of tea had been accumulated in the London market. At the end of 1929 the total of the stocks in the warehouses of the London Tea Brokers' Association, which handles 90 per cent. of the imports into the United Kingdom, was 260,427,000 lb., whereas at the end of 1927 the total had been 213,025,000 lb. and at the end of 1928 220,523,000 lb. As the increase in consumption was not sufficient to absorb the growing stocks, the price decline which had appeared in 1928 became strongly accentuated in 1929.

Agreement of 1930 concerning the restriction of tea production, and its effects.

In 1920-21 the planters in India took steps on their own account to reduce production in consequence of the difficulties in marketing due especially to the results of the war. In 1929 in view of still more serious difficulties, the British and Netherlands planters resolved, on the invitation of the Indian Tea Association, to restrict production by joint agreement.

The agreement signed at the beginning of 1930 between the planters of India, Ceylon, and the Netherlands Indies made provision for a voluntary decrease in production which was fixed at 57,600,000 lb. for 1930, thus distributed: 36,500,000 lb. decrease for India, 11,500,000 lb. for Ceylon, and 9,500,000 lb. for the Netherlands Indies.

The result of this agreement, in conjunction with adverse climatic conditions, was a reduction in the output of tea by 48,000,000 lb. in India, and by 8,000,000 lb. in Ceylon. In the Netherlands Indies the reduction was only between 1,000,000 to 2,000,000 lb. This lower figure in the Netherlands Indies was due to the increase in the production by native growers stimulated by the restriction carried out by the European growers, the genuine effort made by the latter being to a large extent neutralised by the increased native production.

The total registered gross exports which in 1929 amounted to 967,000,000 lb., as is stated above, fell in 1930 to 895,100,000 lb. The absorption of tea in the different importing countries decreased, however, from 912,700,000 lb. in 1929 to 906,000,000 lb. in 1930.

The stocks in bond in Great Britain rose from about 275,000,000 lb. in 1929 to 290,000,000 lb. at the end of 1930. The decrease in the stocks of Indian and Ceylon teas was balanced by the increased imports coming from Java and Sumatra. Prices fell. "Good Pekoe" tea, which in 1929 had been quoted in London at an average of 1s. 1d per lb., fell to an average of 11 ½d. in 1929 and to 9 ¼d. in 1930.

The agreement was not renewed in 1931. In the course of that year the total figure for exports from the producing countries was 910,700,000 lb., while the absorption by the importing countries remained unchanged at 906,700,000 lb. Stocks showed a slight decrease standing at 270,000,000 lb. in the bonded warehouses of Great Britain. Prices however weakened very markedly. "Good Pekoe" declined on the London market to an average of 6 ¼d. per lb.

Efforts were made in the course of 1932 to reintroduce restrictions, but without result. It was only at the end of that year that negotiations undertaken by the representatives of the Netherlands Indies growers with the Indian Tea Association and the Ceylon Association in London led to the conclusion of an agreement based on a plan of restriction of exports rather than restriction of production as in 1930.

Agreement of 1933 concerning the restriction of the exports and the production of tea.

This agreement, which received the support of 90 per cent. of the growers of the countries concerned, was signed on 9 February 1933 by the Indian Tea Association (London), the South Indian Association in London, the Ceylon Association in London, the Vereeniging voor de Thee-Cultuur in Nederlandsch Indië (Amsterdam) and the Nederlandsch Indische Vereeniging voor de Thee-Cultuur (Batavia). The form of the agreement was as follows:

(a) Exports of tea of all qualities from the producing countries (India including Burma and all the independent States), Ceylon, Sumatra, Java and other islands included in the Netherlands Indies, shall be regulated in order to restore equilibrium between supply and demand:

(b) The Governments of the countries in question are to undertake to prohibit exports of tea in excess of quotas to be indicated later:

(c) The standard upon which regulation is based shall be fixed on the maximum exports of tea from each producing country reached in any of the three years 1929, 1930 or 1931. The standard fixed for India was 382,594,779 lb., for Ceylon 251,522,617 lb., and for the Netherlands Indies 173,597,000 lb.:

(d) For the first year of regulation (from 1 April 1933 to 31 March 1934) the degree of regulation shall be 85 per cent. of the standard export. A Committee shall be set up representing the tea growers concerned which

Committee shall, on or before 31 December of each year, fix the quota for the following year taking into consideration stocks and prices.

(e) The agreement shall be for a period of five years:

(f) Existing tea areas are not to be extended during the period of the validity of the agreement except in certain cases in which the existence of a tea estate would otherwise be imperilled. No further area may be sold or leased for the cultivation of tea and no planting of tea may take place on land now carrying other products. In no case may such extensions and new plantings exceed one half per cent. of the existing total area of tea plantations of each territory. The respective Governments are to make binding regulations to the above effects.

The entry into force of this agreement was made subject not only to the approval of the Government of each of the producing countries which were signatories of the agreement and to the passing and enforcing of such measures as are necessary, but also to the constitution of a Committee or other organisation representative of the collective interests of tea growers and to the determination of the powers, duties, and functions of this body.

At a meeting of the representatives of the tea associations held in London on 30 March 1933, recommendations were unanimously adopted which form an important supplement to the agreement in question.

In the first place it was decided that the agreement should come into force on 1 April 1933. From that date all tea exports had to be subject to export licence, or if the necessary legislation should not at the time have been passed, the exports had to be considered as part of the quotas which the producing countries were entitled to export.

It was further agreed that as far as possible the production of the three signatory countries should be so adjusted that it should not in any year exceed the local consumption plus the quantity which the country in question is entitled to export.

The export quotas for the following year, the determination of which was, in accordance with the rules laid down in the agreement, entrusted to the Committee (which took the name of the International Tea Committee), are to be fixed by a date not later than 30 November of each year. It was laid down that, in determining these quotas, account should be taken of the fact that the signatory parties did not aim through the agreement at an excessive rise in prices. Provision is also made for the event of want of unanimity in respect of the fixing of quotas: in these circumstances recourse is to be had to arbitration according to the rules laid down in the memorandum.

Detailed rules have been established with reference to the export licences which may be either ordinary or special. An ordinary licence shall cover tea reaching any port in the producing country and intended for sale or shipment; such licence holds good till the end of the year of regulation for which it has been issued and not afterwards, except in the case which will be specified below. Special licences shall cover tea shipments which are the subject of an ordinary licence but not exported by the end of the year of regulation for which such ordinary licence is available. Special permits cannot be issued later

that the 14th day after the end of the year of regulation and only in exchange for an ordinary licence; they remain good until the 30 June following the end of the year of regulation. In this connection it has been established that the quantities of tea exported by each country shall include both the quantities covered by ordinary licences and those covered by special licences.

The Memorandum anticipates the case that the quantity of tea exported during the year of regulation should be less than the quota allotted to the signatory country: the deficiency may not be added to nor affect the country's quota for the following year, provided always that the Committee should be given power at the request of the country concerned to determine whether, and if so, the extent to which, force majeure (other than weather or climatic conditions) prevented the export of the allotted quota, and to determine, the amount that may consequently be added to the export quota of the country concerned for the following year.

An important provision contained in the Memorandum is that referring to the prohibition of the export of tea seed.

Rules are established in the Memorandum on the formation and the working of the International Tea Committee. The office of this Committee is in London and the Committee consists of the representatives of the producing countries which are parties to the agreement; these members are appointed by their own countries. The members representing each country are to designate one of their number who will have the right to vote and another to replace him in case of absence. The number of votes to which each country is entitled was fixed as follows: India 38, Ceylon 25, Netherlands Indies 17. The Committee may pass resolutions with the provision that they may be modified or repealed only by a unanimous vote on the Committee. A unanimous vote is necessary also in the event of another country desiring to be admitted to the tea export regulation scheme. In regard to the unanimity required for the fixing of quotas, reference may be made to the foregoing remarks on the subject.

The following is a statement of the powers, duties, and functions of this Committee: (a) fixing, after the first year of the agreement, of the quota for the year; (b) assembling of statistics and of information relating to areas under tea, production, exports, consumption, and stocks in the producing countries as well as in other countries; (c) the study of the increase or falling off of consumption and the reasons therefore; (d) the study of ways and means of developing the world consumption of tea; (e) recommendation of measures for the improvement, development, and control of production and consumption of tea; (f) the publication at regular intervals of accurate statistics regarding the world tea situation, the suggestion of steps to be taken for the adjustment of production to the exports and the demand, and for improving methods of sale and marketing; (g) consideration and discussion with producers in tea-growing countries not parties to the agreement, of measures of mutual interest with a view to the conclusion of an agreement; (h) the election of a Chairman, to be chosen from among the members of the Committee, as well as the appointment of a secretary, statisticians, accountants, and additional staff required to carry on the work of the Committee.

Immediately after the signing of the agreement the Tea Associations invited the Governments of the three countries concerned to take the necessary legislative measures to give full effect to the agreement. This was done with varying degrees of rapidity and completeness by the three countries.

Legislation of British India concerning the regulation of the export and the production of tea.

It may be of interest to give here some information about the legislative regulations adopted in India (1). The measures taken in that country are of special interest because they have not undergone modifications, as have the measures taken in the other signatory countries, during the first three years of regulation (except only in regard to the overland export of tea to Iran).

It is unnecessary to dwell on the provisions relating to the formation, history, and dissolution of the Indian Tea Licensing Committee, the constitution of which was entrusted to the Governor General in Council.

Governmental control, according to the Act of 1933, does not apply to tea exported by parcel post nor to tea shipped as stores on board any vessel in such quantity as the Customs Collector judges reasonable having regard to the numbers of the crew and passengers and the length of the voyage to be made. Apart from special cases and exceptions all the tea sent by sea, and all tea sent by sea or land into any of the French or Portuguese Settlements bounded by India, must be accompanied by a permit issued by the Indian Tea Licensing Committee.

The Indian overseas Export Allotment for the fiscal year 1933-34, including tea exported overseas during that year before the entry into force of this Act was fixed at 320,570,560 lb. avoirdupois. On the other hand the overseas Export Allotment for India for the subsequent financial years shall be declared by the Governor General in Council by notification in the Gazette of India after consulting the Committee and paying due regard to all interests concerned.

The export allocation to each tea estate during each financial year, *i. e.*, the total quantity which the owner of the plantation may export overseas during that year shall be determined by the Committee in the manner prescribed. The total of all the allocations for a single fiscal year shall not exceed the Indian overseas Export Allotment for that year.

The owner of a tea estate to which a quota has been allotted for any financial year shall have the right to obtain at any time during that year export licences to cover the export overseas of tea up to the amount of the unexhausted balance of the quota, *i. e.*, up to the amount of the quota less the quantity for which export licences have already been issued against it: Provided that the unexhausted balance of any quota at any time during financial year 1933-34 after the entry into force of this Act shall be the amount of the quota less: (a) the

(1) The Indian Tea Control Act 1933, No. XXIV. *The Gazette of India*, Part IV, 23 September 1933.

quantity for which export licences have already been issued against the quota under of this Act, and (b) the quantity for which export licences were issued against the quota by the Licensing Committee constituted under the Tea Licensing Resolution, and (c) the quantity of the tea produced on the estate and exported overseas after 31 March 1933 and before 26 May 1933.

The right of the owner of a tea plantation in virtue of these provisions may be transferred wholly or partially and on condition that the Committee is satisfied with the evidence of the transfer. The person to whom the right in question has been transferred has the right to obtain export licences up to the quantity covered by the transfer or up to the quantity of the unexhausted balance of the quota, whichever may be the less.

Application should be made, before 21 March of the fiscal year to which the quota refers, for the export licences issued by the Committee and these licences hold good up to the end of the fiscal year. If however the tea covered by a licence has not been exported overseas before the end of the fiscal year for which the licence was issued, the person to whom the licence was granted may, before the expiration of the first fortnight of the succeeding financial year, forward the licence to the Committee together with an application for a special export licence covering the same quantity of tea. Such a licence holds good up to 30 June of the year in which it was issued. The quantity of tea covered by a special export licence must be included in the export quota of the year in which the original licence was issued.

No consignment of tea may be shipped, or water-borne to be shipped for export overseas until the owner has delivered to the Customs Collector a valid export licence or a special licence covering the quantity to be shipped. The same holds good for consignments of tea shipped, or waterborne to be shipped, for export to any of the French or Portuguese Settlements "bounded by India.

The Committee may serve by post a notice on the owner of any tea estate requiring him to supply, within a specified period, such returns relating to the output, sale, and export, of the tea grown on the estate as the Committee may deem necessary to the discharge of its duties. If this return be not supplied, the Committee may refuse to allot a quota to this estate or if this has already been done, it may cancel the unexhausted balance of the quota and refuse to issue further export licences.

The Committee may charge and collect the following fees: (a) a licence fee for each export licence or special licence issued; this fee may be fixed by the Governor General in Council at a rate not exceeding the sum of eight annas per 1000 lb. of tea covered by the licence; (b) copying fees for the certified copies of accounts of quotas at the rate of one rupee a copy. The Committee is to apply these fees to meet the expenses incurred in pursuance of the purposes of this Act and also, with the previous sanction of the Governor General in Council, for the payment of a contribution to the maintenance of any international tea committee established in furtherance of these purposes in tea producing countries in general.

The Governor General in Council may make rules: (a) prescribing the manner in which the export quotas of tea estates shall be determined; (b) reg-

ulating the grant of permits for the export of tea consigned to the French and Portuguese Settlements; (c) prescribing the form of export licences and of special export licences; (d) generally, to carry out the purposes of the Act.

No quota fixed and no order granting or refusing to grant any licence or permit issued shall be called in question in any Court.

The Act also contains interesting provisions on the control of the extension of tea planting.

No one may plant tea on land which was not planted with tea on 31 March 1933, except with a written permission granted by the Tea Licensing Committee or in the name of the Committee. Any land which had been planted with tea at any time during the period of two years before 31 March 1933, but which in accordance with tea-growing practice was lying fallow on that date, is considered as having been planted with tea on 31 March 1933. It was established that the total area of land in India in respect of which these permissions might be granted was not to exceed 4,000 acres, from which there might be deducted the increase in the area planted with tea which might have occurred during the period between 31 March 1933 and the entry into force of the Act.

The determination of the total area of lands in a single province for which these permissions might be granted was to be made by the Governor General in Council and, subject to the limit already cited for India as a whole, should be as near as possible one half of one per cent. of the total area in the province under tea cultivation on 31 March 1933.

The time within which applications might be made for permission to plant tea for the first time on any land was fixed at one month from the entry into force of the Act.

Measures adopted by the International Tea Committee and the effect of the Agreement of 1933 during the first three years of application (I).

At the end of March 1934, *i. e.*, at the end of the first year during which the agreement of 1933 was in force, the three regulating countries had exported 650,300,000 lb. thus distributed: India, 317,100,000 lb. (by sea), Ceylon 1b., 197,000,000, the Netherlands Indies 136,100,000 lb.; these countries were entitled to export during this year of regulation 682,000,000 lb. thus distributed: India, 320,600,000 (by sea), Ceylon 213,800,000, Netherlands Indies 147,600,000 lb. Indian overland exports were not subject to the export licence system except for exports made over the land frontiers of India and directed to the French and Portuguese possessions, such exports being classed with exports by sea. However, while during the year 1933 the export quota overland had been fixed at 4,600,000 lb., the actual overland exports exceeded this limit by 2,700,000 lb.

In the course of the previous year (1 April 1932 to 31 March 1933) these countries had exported 825,200,000 thus distributed India 379,800,000 lb. (by sea), Ceylon 258,800,000 lb. and Netherlands Indies 186,600,000 lb.

(1) See tables I and II.

The other exporting countries not bound by the agreement of 1933, which during the period 1 April 1932 to 31 March 1933 had exported in all 140,000,000 lb. of tea, exported in the course of the year 1 April 1933 to 31 March 1934 nearly 9,000,000 more than this; the increase came mainly from Japan and Formosa.

The world absorption of tea, which in the year 1932-33 had been 849,300,000 lb., increased during the year 1933-34 to 866,400,000 lb.

The stocks in bonded warehouses in Great Britain, which on 31 March 1933 mounted to 295,800,000 lb., had fallen by 31 December 1933 to 288,200,000 lb. and on 31 March 1934 stood at 273,200,000 lb.

In consequence of the improvement in the situation the Committee unanimously agreed to fix the quota for the financial year 1933-35 at 87 ½ per cent. of the standard export instead of the 85 per cent. which had been fixed for the first year of regulation. The Governments of the countries concerned were in agreement with this decision.

The exportation of the regulating countries amounted in the second year of regulation to 688,800,000 lb. thus distributed: India, 323,400,000 lb. (by sea), Ceylon 220,000,000 lb., Netherlands Indies 145,200,000 lb.; these countries were entitled to export 702,000,000 lb. thus distributed: India 330,000,000 lb. (by sea), Ceylon 220,100,000 lb., Netherlands Indies 151,900,000. The overland export of tea from India during the year 1934-35 exceeded by 11,877,472 lb. the authorised quota which had been fixed for that season at 4,771,282 lb. In consequence the International Tea Committee through the medium of the Tea Licensing Committee urged on the Government of India the suggestion, already made in 1934, that a system of control also of exports overland should be introduced. The stress laid on this matter subsequently had effect.

The exportation from non-regulating countries during 1934-35 was 164,700,000 lb.: the very large increase was due to the exports from China and Formosa.

There was a considerable decrease in world absorption from 866,400,000 lb. at the end of March 1934 to 844,300,000 lb at the end of March 1935.

Stocks in the bonded warehouses of Great Britain attained by 31 December 1934 the figure of 302,000,000 lb., falling again by 31 March 1935 to 288,700,000 lb.

In consequence of these results the Committee decided to recommend the Governments of the regulating countries to fix for 1935-36 an export quota of 82 ½ per cent. of the standard export. Actually, whereas in November 1933 the Committee had been of the opinion that the exportable quantity for the second year of regulation might be increased without disadvantage, at its meeting of October 1934 the Committee was obliged to conclude that its previous decision had been somewhat too optimistic, a conclusion borne out by the volume of stocks found to be existing at the end of 1934. None the less the Committee justified this decision on the ground that, judging from the attitude of the trade at the time, to have continued the quota at 85 per cent., fixed for the first year of regulation, into the second year would have been to invite reactions much more serious than those produced by the increase to 87 ½ per cent., actually recommended. The trade had in fact seemed to be convinced that 87 ½ per cent. would not provide a supply

of tea sufficient for consumption requirements; and it would appear that the increase in 1934-35 in imports from China and Formosa was attributable to this conviction.

As already stated, the Committee had been charged by the Memorandum of Recommendations, *inter alia*, to endeavour to find ways and means for increasing the world consumption of tea. The Committee had recognised that the regulation of exports would not in itself be sufficient to solve the difficulties relating to the trade in tea; it was essential to take steps to increase the sale of tea on the world market. From approximate calculations it is anticipated that in 1938 the potential supplies from the areas now under cultivation will be some 315,000,000 lb. more than the 1934 absorption. In consequence, the Committee recommended the formation of a joint Commission of enquiry, consisting of representatives of the three countries concerned, which was to proceed to the United States with the object of studying in the first place the prospects of increasing by propaganda consumption of tea in that country. This was done. While this enquiry was in progress, the Committee on 10 October 1934 unanimously adopted a memorandum which was afterwards approved by the Producers' Associations of the three countries concerned.

As a beginning the Committee recognised that the propaganda at present carried out by the Indian Tea Cess Committee, the Ceylon Tea Propaganda Board and the Amsterdam Tea Association, in India, the United Kingdom, the United States, Canada, South Africa, and Europe was not adequate to meet either the urgent need for opening new markets for large quantities of tea or the necessity for checking a decline in consumption in the existing markets. In consequence it was considered imperative that the existing propaganda should be expanded; that it should be devoted exclusively to the purpose of extending the consumption of the teas grown in the regulating countries; that efforts should be made only on markets where the greatest increase in the consumption of tea, is likely to be obtained; and, finally, that propaganda efforts should be as closely co-ordinated as possible in order to ensure the best utilisation of the resources available and to ensure that all the experience and information gained by each of the organisations concerned in the propaganda be placed at the disposal of the others with a view to increasing the economy and efficiency of the work as a whole.

The results of the third year of regulation (1935-36) have been favourable.

The exports of the regulating countries were 682,400,000 lb. in all, thus distributed: India 320,000,000 lb., Ceylon 215,900,000 lb., Netherlands Indies 146,500,000 lb.; these countries were entitled to export 707,500,000 lb. thus distributed: India 322,100,000 lb., Ceylon 224,100,000 lb., Netherlands Indies 161,300,000 lb. The figures referring to India this time cover also the overland exports to Iran, whereas for the previous years the overland export were given separately.

The Act passed in India to give effect to the regulations contained in the International Agreement of 1933 had been confined, as we have said, to the overseas exports, although in the International Tea Agreement the standard

export relating to India consisted of two parts: exports by sea and exports overland. The Government of India however at the time of the passing of the Indian Tea Control Act judged that it was unnecessary to control exports over the land frontiers and that these exports should be treated as Indian domestic consumption. In consequence the licensing system had not been applied in the case of these exports.

In view, however, of the very large quantities of tea exported to Iran in excess of normal exports, the Government of India decided that, beginning from 1 September 1935, the total licences issued in India for 1935-36 and following years should cover all tea exported from India by sea, and those to Iran by land. The quota assigned to India was modified, by deducting 60 per cent. of the excess volume from the export licences issued during the years 1936-37 and 1937-38 in equal annual amounts.

TABLE I. — *Exports of tea.*

(Quantities in million lbs.)

	Years ending 31st March			
	1933	1934	1935	1936
REGULATING COUNTRIES.				
India (by sea)	379.8	317.1	323.4	(a) 314.2
India (by land to Iran)	1.3	5.5	14.5	5.8
Ceylon	258.8	197.0	220.2	215.9
Netherlands East Indies	186.6	130.2	145.2	146.5
Total Regulating Countries	826.5	655.8	703.3	682.4
NON-REGULATING COUNTRIES.				
China	91.4	91.5	102.1	91.0
Japan	27.8	32.9	28.9	37.3
Formosa (b)	14.9	16.6	22.2	20.4
French Indo-China	1.5	1.6	2.8	2.5
Nyasaland	3.0	3.7	5.4	6.7
Kenya	1.1	2.0	2.9	6.0
Other Africa . . . . .	.3	.4	.4	.5
Total Non-Regulating Countries	140.0	148.7	164.7	164.4
Grand Total	966.5	804.5	868.0	846.8

(a) Subject to adjustment when final figures are available.

(b) Excludes the shipments of tea from Formosa for consumption in Japan which are looked upon as domestic trade.

TABLE II. — *Absorption of tea.*

(Quantities in million lbs.).

	Years ending 31st March			
	1933	1934	1935	1936
I. — EUROPE.				
United Kingdom (a)	427.2	432.4	436.3	451.0
Netherlands	27.1	21.9	23.7	24.1
U. S. S. R.	31.8	51.8	48.0	50.8
Irish Free State	22.6	24.8	22.1	22.3
Germany	10.0	10.4	10.4	10.3
Poland and Danzig	3.8	3.9	3.6	3.6
Channel Islands and Gibraltar (b)	2.6	2.9	2.5	* 2.5
France	3.3	4.3	1.9	2.8
Czechoslovakia	1.5	.8	1.0	1.2
Switzerland	2.3	1.5	1.5	1.9
Denmark	1.4	1.4	1.2	1.3
Austria	1.0	.7	.8	.8
Romania	1.1	1.0	1.1	* 1.1
Yugoslavia . . . . .	.5	.4	.4	* .4
Sweden . . . . .	.8	.9	.9	1.1
Belgium and Luxembourg . . . . .	.6	.5	.5	.6
Italy . . . . .	.3	.3	.3	.3
Norway . . . . .	.4	.4	.4	.4
Portugal . . . . .	.6	.5	.4	.4
Greece . . . . .	.5	.4	.3	.5
Hungary . . . . .	.5	.4	.5	.5
Malta . . . . .	.5	.3	.4	* .4
Spain . . . . .	.3	.3	.3	.3
Finland . . . . .	.2	.2	.3	.2
Estonia . . . . .	.1	.1	.1	.1
Latvia . . . . .	.1	.1	.1	.1
Lithuania . . . . .	.1	.1	.1	.1
Bulgaria . . . . .	.1	.0	.1	.1
Other Countries	* .5	* .5	* .5	* .5
Total	541.8	563.2	559.7	579.7
II. — NORTH AND CENTRAL AMERICA.				
United States (c)	91.5	92.7	78.0	82.2
Canada	38.0	35.8	30.0	36.7
Newfoundland	1.5	1.0	1.5	* 1.5
Alaska . . . . .	.1	.1	.1	* .1
Mexico . . . . .	.1	.1	* .1	* .1
Other Countries	* 1.1	1.1	* 1.2	* 1.2
Total	132.3	130.8	110.9	121.8

(*) Estimated.

(a) Quantities entered for home consumption.

(b) Exports from the U. K. and producing countries.

(c) Excluding Alaska and Hawaii.

TABLE II. — *Absorption of tea* (continued).

(Quantities in million lbs.).

	Years ending 31st March			
	1933	1934	1935	1936
III. — SOUTH AMERICA.				
Chile	3.5	1.6	3.5	4.2
Argentina	4.1	4.2	3.9	4.0
Peru	1.0	1.1	1.1	* 1.2
Brazil . . . . .	.3	.3	.4	* .4
Bolivia . . . . .	.3	.3	* .3	* .3
Uruguay . . . . .	.3	.4	.3	* .4
Trinidad and Tobago . . . . .	.2	.2	.2	* .2
Other Countries . . . . .	.4	.4	.4	* .5
Total	10.1	8.5	10.1	11.2
IV. — ASIA.				
Iran	10.0	12.0	18.0	11.5
Malaya	3.8	3.1	4.9	4.0
Iraq	4.1	4.5	4.9	5.5
Siam	1.6	1.6	1.9	* 2.0
Turkey	1.7	2.4	1.2	* 1.5
Hong Kong	* 2.0	* 2.0	* 2.0	* 2.0
Arabia (a)	1.8	.7	1.3	1.5
Philippine Islands . . . . .	.7	.6	.5	* .5
Syria and Lebanon . . . . .	.3	.3	.4	* .4
Sarawak . . . . .	.1	.2	.2	* .2
Palestine . . . . .	.3	.4	.6	* .7
Aden . . . . .	.2	.1	* .2	* .2
British North Borneo . . . . .	.1	.1	* .1	* .1
Portuguese India . . . . .	.1	.1	* .1	* .1
Manchukuo	1.3	3.9	4.2	4.8
Other Countries	* 1.1	* 1.0	* .9	* .9
Total	29.2	33.0	41.4	35.9

(*) Estimated.

(a) Exports from Aden and producing countries.

TABLE II. — *Absorption of tea* (continued).

(Quantities in million lbs.).

	Years ending 31st March			
	1933	1934	1935	1936
V. — AFRICA.				
Morocco, French	17.5	18.6	16.5	16.2
Morocco, Spanish	1.1	1.0	1.1	* 1.1
Morocco, Tangier Zone . . . . .	.3	.3	.2	* .3
Egypt	13.8	12.7	13.1	13.5
Union of South Africa (a)	11.9	11.6	11.6	14.2
Anglo-Egyptian Sudan	4.1	3.2	4.7	5.2
Tunis	2.7	2.1	2.8	3.3
Algeria	3.1	4.5	2.5	2.5
Tripolitania	2.6	2.9	* 2.9	* 2.9
Cyrenaica	1.0	.9	* 1.0	* 1.0
Southern Rhodesia . . . . .	.5	.5	.4	* .4
Senegal . . . . .	.3	.6	* .4	* .4
French Somali Coast . . . . .	.1	.0	* .1	* .1
Mauritius . . . . .	.5	.3	.3	* .4
Tanganyika (a) . . . . .	.3	.3	.3	* .2
Somaliland, Italian . . . . .	.6	.3	* .3	* .3
Zanzibar . . . . .	.4	.2	.3	* .3
Eritrea . . . . .	.2	.1	* .2	* .2
South-West Africa . . . . .	.2	.2	.2	.2
Nigeria . . . . .	.1	.1	.1	* .2
Somaliland, British . . . . .	.2	.2	* .2	* .2
Other Countries	* .9	* .8	* .8	* .9
Total	62.4	61.4	60.0	64.0
VI. — OCEANIA.				
Australia	47.7	46.9	44.0	44.7
New Zealand	10.6	12.0	9.3	10.6
Hawaii . . . . .	.3	.3	* .3	* .3
Fiji Islands . . . . .	.2	.2	.2	* .2
New Caledonia . . . . .	.1	.1	* .1	* .1
Other Countries	* .1	* .2	* .2	* .2
Total	59.0	59.7	54.1	56.1

(*) Estimated.

(a) Net imports of foreign tea.

TABLE II. — *Absorption of tea* (continued).

(Quantities in million lbs.).

	Years ending 31st March			
	1933	1934	1935	1936
VII. — IMPORTS INTO PRODUCING COUNTRIES.				
<i>(excluding Africa).</i>				
India (by sea) (a)	5.8	4.7	3.1	5.1
Ceylon . . . . .	.0	.0	.0	.0
Netherlands East Indies	3.7	2.1	1.9	1.1
China	2.6	.7	.6	.6
Japan (b) . . . . .	.8	.8	.8	.8
Formosa . . . . .	.0	.0	.1	.1
French Indo-China	1.6	1.5	1.6	1.7
Total	14.5	9.8	8.1	9.4

(*) Estimated.

(a) Net imports by sea of foreign tea.

(b) Excluding imports from Formosa.

On the other hand, the exports overland to Afghanistan, Thibet, Nepal, Sikkim and Bhutan, which showed no noteworthy changes during the previous years and which are regarded as forming part of the Indian domestic consumption, continue to be exempt from the requirements of the system of export licences.

As regards exports of non-regulating countries, the total did not vary significantly in the course of the fiscal year 1935-36, as 164,400,000 lb., were registered as compared with 164,700,000 lb. exported during the year 1934-35. Exports from China and Formosa were smaller while those from Japan and Kenya were larger.

The world absorption of tea has shown a remarkable advance; it has passed from 844,300,000 lb. during the year 1934-35 to 878,100,000 during the year 1935-36.

Bonded stocks in Great Britain were registered on 31 March 1936 as 249,300,000 lb. as compared with 288,700,000 lb. on 31 March 1935. These figures are subject to revision.

The results of this third year of regulation provide evidence that the Committee were right in fixing the quota at 82 ½ per cent. of standard.

There has been an encouraging increase in consumption in spite of the increase of 2 d. per lb. recently made in the duty on tea entering the United Kingdom.

In the course of a Conference held in the month of July 1935 by the representatives of the three Governments concerned, the Committee was invited to

express its view on the effects of restrictive regulation of export of tea, and on the experience gained in the course of the first years of the operation of the agreement. The Committee expressed the opinion that the operation of the agreement would be facilitated if the Governments of India and of the Netherlands Indies, not so far represented on the Committee, would appoint members to represent them. These suggestions were favourably received, and delegates were appointed by the two Governments.

As regards the propaganda for the extension of consumption of tea, the Committee, on the basis of the decision adopted in the course of the previous year and relating to the co-ordination of the activity of the various organisations engaged in propaganda work, has decided to establish a body to undertake such co-ordination under the name of the International Tea Market Expansion Board. This body appears to be giving considerable effort to the achievement of this end.

F. ARCOLEO.

THE SOCIAL INCOME, AND THE CHANGES IN IT, BETWEEN 1931-1932 AND 1932-1933 IN ESTONIA, LATVIA, LITHUANIA, POLAND, AND CZECHOSLOVAKIA

SUMMARY: Government measures, size of crops, agricultural output, returns, farm expenses, social income, and the composition of the social income, in: Estonia, Latvia, Lithuania and Poland. The farmers' position and the social income in Czechoslovakia. Summing up.

In a previous article we dealt with the variations between 1931-32 and 1932-1933 in the social income from farms concerned predominantly with the growing of vegetable products in several European countries. We are now concerned with the changes between with 1931-32 and 1932-33 in the social income from predominantly arable farms in Estonia, Latvia, Lithuania, Poland, and Czechoslovakia.

A. — Estonia.

The following measures were taken by the Government to assist the farmers. The rate of interest on loans to farmers by the Land Bank was reduced to 2.5 per cent. By a law of 23 May 1933 every farmer who fulfilled the necessary conditions was given the right to obtain special loans which were compulsorily converted into long term loans; the total of these loans could not exceed 6,000,000 Estonian crowns. Measures were taken to make the domestic market for home produced agricultural products as large as possible; the duties on imported agricultural requisites were either removed or reduced. The system of import licenses, introduced in 1931-32, completely checked the importation of cereals and considerably reduced the importation of other agricultural products. Exports

were strictly controlled and it was possible thus to maintain at a high level the quality of butter and eggs shipped to foreign countries. Measures were taken to create good conditions for the preservation of butter; arrangements were made with dairies to vary the price of milk according to its quality; and eggs were graded according to their size (see table on page 232).

The prices of agricultural products continued to fall. Exports of butter and eggs fell in 1932; but at the beginning of 1933 exports of eggs increased as a result of the measures taken by the Government; bacon exports also increased. Briefly one can say that the position of Estonian farmers became worse in 1932-1933, and that the government measures did not fulfil the expectations to which they gave rise. Here are relative statistics.

Prices of Agricultural Products, in Crowns.

		1931-32	1932-33
Rye	in quintals	15.4	14.1
Wheat	"	19.8	19.4
Barley	"	16.0	14.3
Oats	"	9.8	9.8
Potatoes	"	2.5	2.4
Butter exports	in 100 kg	151.5	99.7
Beef	"	39.0	26.9
Pig-meat	"	51.0	50.3

The figures for output from the 300 farms which kept accounts were as follows:

	Rye (kg. per hectare)	Wheat (kg. per hectare)	Spring Wheat (kg. per hectare)	Barley (kg. per hectare)	Oats (kg. per hectare)	Potatoes (kg. per hectare)	Hay (kg. per hectare)	Green- fodder (kg. per hectare)	Milk (kg. per farm)
1931-32. .	1,210	1,348	1,272	1,276	1,198	14,191	3,201	3,256	14,252
1932-33. .	1,493	1,254	1,190	1,042	1,030	13,666	2,955	2,574	12,627

The harvests were poor, and the scarcity of fodder reduced the output of dairy products. The increase in cattle and pigs was greater in 1932-33 than in 1931-32 as can be seen from the following figures:

Gross Return: Quantities per Hectare.

		Farms in all countries
Cattle (kg live weight)	1931-32	7 —
	1932-33	10 —
Milk (kg)	1931-32	272 —
	1932-33	253 —
Pig-meat (kg live weight).	1931-32	12 —
	1932-33	19 —
Cereals (quintals)	1931-32	1.06
	1932-33	1.15
Potatoes (quintals)	1931-32	0.85
	1932-33	0.99

TABLE I. — Social Income, Gross Return, and Farm

GROUP		Number of farms	Average area in hectares	Animal production				Vegeta- ble pro- ducts
				Cattle		Pigs 3	Other animals 4	
				Breed- ing for slaugh- ter and other purpo- ses 1	Milk and dairy pro- ducts 2			
								5
Estonia:								
The whole country	1931-32	300	37.48	4.62	29.94	10.94	9.45	27.90
	1932-33	300	37.24	3.54	18.34	12.41	8.46	28.12
Latvia:								
Livonia	1931-32	43	37.80	9.31	55.19	20.17	11.95	34.44
	1932-33	46	36.96	8.38	57.59	20.87	9.82	30.86
Courland	1931-32	23	43.09	7.03	24.80	14.04	6.43	32.58
	1932-33	22	35.01	5.28	30.86	18.91	7.65	30.16
Zemgale	1931-32	29	40.27	6.73	41.25	15.03	10.23	46.43
	1932-33	23	39.71	6.37	38.16	14.31	7.84	47.96
Latgale	1931-32	16	21.05	7.12	30.39	17.67	13.55	49.73
	1932-33	16	19.05	9.25	35.45	17.16	14.67	62.39
Farms of less than 20 hectares	1931-32	25	15.16	5.87	44.55	20.68	11.22	41.96
	1932-33	25	14.73	5.36	37.31	19.50	11.67	58.96
Farms of 20-50 hectares	1931-32	51	30.31	6.59	39.69	14.65	10.53	34.36
	1932-33	53	28.67	7.08	41.49	16.78	8.62	37.88
Farms of more than 50 hectares	1931-32	35	62.76	9.03	40.35	16.81	8.94	41.66
	1932-33	29	62.12	6.82	43.25	16.89	7.47	40.36
Lithuania:								
The whole country	1931-32	100	21.05	6.74	55.67	54.63	13.93	72.88
	1932-33	124	20.57	8.24	42.—	58.97	21.45	79.56
Poland:								
South	1931-32	140	8.08	3.90	18.22	7.50	10.45	30.32
	1932-33	106	7.16	3.66	16.60	6.47	8.34	22.11
East	1931-32	63	16.54	2.12	13.83	7.88	8.04	29.41
	1932-33	93	15.95	2.83	11.44	8.69	7.64	20.46
Centre	1931-32	150	12.83	1.87	12.03	8.64	8.62	27.56
	1932-33	140	11.99	3.16	10.61	10.23	7.88	23.42
West	1931-32	84	18.59	4.11	20.40	12.22	8.84	32.32
	1932-33	78	19.47	4.90	15.68	13.31	8.43	28.12
Poland:								
2 to 5 hectares	1931-32	57	3.90	3.63	21.57	7.35	12.34	25.94
	1932-33	57	3.72	3.36	17.28	6.96	9.50	19.41
5 to 10 hectares	1931-32	144	7.42	2.82	15.23	8.26	10.44	31.11
	1932-33	125	7.32	3.75	12.91	8.61	9.22	20.41
10 to 15 hectares	1931-32	98	12.29	3.18	16.11	10.40	8.93	29.22
	1932-33	105	12.07	3.28	11.95	9.88	6.82	22.22
15 to 30 hectares	1931-32	115	20.54	3.30	15.76	11.14	7.15	35.46
	1932-33	106	20.32	3.61	12.37	12.06	6.54	25.86
30 to 50 hectares	1931-32	23	35.32	3.07	10.60	7.26	4.03	27.66
	1932-33	24	37.15	3.81	9.76	9.29	3.89	25.66

Expenses, per Hectare as a Percentage of the Social Income for 1928-29.

Other bran- ches	Total gross return	Working costs		Social income								Social income 1928-29 in national currency
		Seeds, fodder, fertiliz- ers	Other expens- es	Social income (total)	Income going to third persons				Operator's income			
					Taxes	Interest on debts	Wages of hired labour	Total	Remun- eration of family labour	Family capital return	Total	
6	7	8	9	10	11	12	13	14	15	16	17	18
23.28	106.13	9.97	34.71	61.45	2.04	2.85	17.58	22.47	48.31	9.33	38.98	(79.28)
20.41	90.98	7.08	28.85	55.05	1.49	2.24	13.86	17.59	40.73	3.27	37.46	
29.83	160.89	16.28	63.82	80.79	4.26	5.88	39.06	49.20	65.33	33.74	31.59	(65.18)
24.53	161.05	12.22	53.82	95.01	3.97	4.45	30.90	39.32	57.99	2.21	55.69	
21.54	106.42	7.25	42.92	56.25	3.12	3.27	30.38	36.77	45.38	25.90	19.48	(89.91)
22.71	125.10	8.28	40.52	76.30	3.25	2.01	23.28	28.54	41.04	6.72	47.76	
19.68	139.35	15.85	49.16	74.34	3.94	3.66	42.69	50.29	43.06	19.01	24.05	(100.08)
18.64	133.25	9.92	45.52	77.81	2.77	2.51	30.99	36.27	33.95	7.59	41.54	
47.94	172.39	10.80	61.84	99.66	4.95	5.33	21.34	31.62	104.35	36.31	68.04	(62.08)
39.48	178.37	9.60	56.17	112.60	4.67	1.76	18.14	24.57	101.85	13.82	88.03	
34.79	158.78	16.13	50.94	91.71	3.51	5.48	19.77	28.70	83.62	20.67	62.95	(118.39)
27.88	159.79	14.35	44.62	100.82	2.30	3.20	22.48	27.98	67.06	5.78	72.84	
27.96	133.81	11.08	52.44	70.29	3.44	3.25	28.04	34.73	62.82	27.26	35.56	(89.92)
21.31	133.16	8.04	47.34	77.78	3.24	2.82	21.31	27.37	52.21	1.80	50.41	
20.26	137.34	14.41	54.02	68.91	4.34	4.98	49.39	58.71	37.54	27.34	10.20	(69.09)
20.91	135.66	10.38	44.65	80.63	3.73	2.98	34.72	41.43	34.00	5.20	39.20	
71.04	274.83	23.51	66.07	185.25	8.92	8.71	77.60	95.23	100.04	10.02	90.02	(89.55)
34.90	245.08	16.12	65.43	163.53	8.77	7.17	42.29	58.23	98.61	6.69	105.30	
6.78	77.05	4.83	22.20	50.02	2.03	3.20	10.56	15.79	33.06	1.17	34.23	(464.50)
5.94	63.18	3.41	18.53	41.24	2.12	3.45	5.66	11.23	30.03	0.02	30.01	
6.59	67.89	3.01	17.30	47.58	2.24	1.99	11.63	15.86	34.12	2.40	31.72	(223.60)
6.34	63.43	2.46	13.61	47.36	2.55	2.37	10.25	15.17	28.11	4.08	32.19	
6.52	65.53	4.58	18.52	42.43	2.85	3.83	8.79	15.47	28.18	1.22	26.96	(420.38)
5.53	60.67	2.94	14.53	43.20	2.44	2.70	6.40	11.54	24.44	7.22	31.66	
7.89	85.72	9.90	33.69	42.13	2.34	4.88	15.96	23.18	23.68	4.73	18.95	(397.70)
7.69	78.27	6.22	26.22	45.83	2.34	3.45	14.75	20.54	20.64	4.65	25.29	
8.63	79.43	6.67	24.53	48.23	1.75	3.59	5.57	10.91	42.42	5.10	37.32	(555.38)
6.47	63.05	3.91	17.71	41.43	1.73	2.92	3.20	7.85	33.58	0.00	33.58	
6.69	74.61	4.99	21.39	48.23	2.46	3.64	6.45	12.55	30.82	1.14	35.68	(425.91)
6.14	66.91	3.73	17.69	45.49	2.35	3.51	4.45	10.31	31.07	4.11	35.18	
6.82	74.68	5.71	22.37	46.60	2.55	6.75	10.27	19.57	28.70	1.73	27.03	(379.96)
5.59	59.75	3.40	16.00	40.35	2.23	2.24	6.73	11.20	24.30	4.85	29.15	
6.87	79.91	6.25	26.88	46.78	3.05	5.01	15.25	23.31	23.89	0.42	23.47	(291.38)
6.37	66.84	3.32	18.60	44.92	2.70	3.01	11.93	17.64	19.87	7.41	27.28	
5.68	58.25	5.13	22.35	30.77	2.56	2.00	13.53	18.09	14.49	1.81	12.68	(309.50)
5.02	56.80	3.08	20.24	33.48	2.78	3.26	13.29	19.33	12.51	1.64	14.15	

TABLE I. (continued).

GROUP				Number of farms	Average area in hectares	Animal production				Vegeta ble pro ducts
						Cattle		Pigs	Other animals	
						Breed- ing for slaugh- ter and other purpo- ses	Milk and dairy pro- ducts			
Czechoslovakia:										
Forage farms	West	1931-32	34	16.34	—	—	—	—	—	
		1932-33	34	14.74	—	—	—	—	—	
	East	1931-32	8	13.01	—	—	—	—	—	
		1932-33	8	11.95	—	—	—	—	—	
Farms growing cereals and po- tatoes	West	1931-32	110	17 —	—	—	—	—	—	
		1932-33	124	16.05	—	—	—	—	—	
	East	1931-32	25	17.72	—	—	—	—	—	
		1932-33	23	18.38	—	—	—	—	—	
Sugar beet farms	West	1931-32	57	20.66	—	—	—	—	—	
		1932-33	60	17.66	—	—	—	—	—	
	East	1931-32	14	15.52	—	—	—	—	—	
		1932-33	16	16.53	—	—	—	—	—	

Calves and pigs consumed more milk in 1932-33 than in 1931-32; the former consumed 4.19 per cent. of the output against 3.45 in 1931-32, and the latter 1.40 per cent. against 1.08 in 1931-32. Larger quantities of cereals and potatoes were sold in 1932-33.

The gross return in crowns from the production of cereals and from pig fattening increased slightly, but this increase was not sufficient to offset the fall in the gross return from other branches of production. The total gross return fell more than did working costs and as a result the social income for 1932-33 is lower than that for 1931-32. The net return, the family capital return plus the interest on debts, increased however, since the cost of labour fell considerably.

The table on page 236 gives figures for 1932-33 for the gross return, the social income, farm expenses, and net return, in crowns per hectare for farms in various parts of Estonia and in various size groups.

With the exception of farms in the Saare district the gross return on animal husbandry (stock breeding and milk production) is almost the same in all regions. The size of the total gross return and of the social income depends primarily on the return on arable farming. The net return does not follow the same curve as that of the social income. Farms in the Jarva district yielded a greater net return because they had lower costs of labour.

Other branches	Total gross return	Working costs		Social income								Social income 1928-29 in national currency
		Seeds, fodder, fertilisers	Other expen- ses	Social income (total)	Income going to third persons				Operator's income			
					Taxes	Interest on debts	Wages of hired labour	Total	Remun- eration of family labour	Family capital return	Total	
6	7	8	9	10	11	12	13	14	15	16	17	18
—	—	—	—	77.14	3.16	47.13	27.45	77.74	44.97	45.27	0.00	(2312.96)
—	—	—	—	69.66	2.95	6.59	25.53	35.07	45.66	11.07	34.59	—
—	—	—	—	88.16	2.14	5.20	23.18	30.52	60.97	2.43	57.94	(1540.93)
—	—	—	—	63.41	2.54	3.43	12.99	18.96	71.03	26.58	44.45	—
—	—	—	—	82.87	3.57	8.03	27.55	39.15	36.33	7.39	43.72	(2724.87)
—	—	—	—	74.13	3.35	7.90	26.71	37.96	38.22	2.05	36.17	—
—	—	—	—	70.70	3.74	11.74	27.11	42.59	69.48	41.37	28.11	(1291.94)
—	—	—	—	72.12	4.52	9.22	22.81	36.55	60.84	25.27	35.57	—
—	—	—	—	67.62	3.73	10.95	28.40	42.18	22.60	2.75	25.44	(3013.95)
—	—	—	—	66.12	3.99	8.38	26.27	38.64	25.64	1.84	27.48	—
—	—	—	—	48.30	3.14	9.01	18.13	30.28	41.94	23.92	18.02	(2412.18)
—	—	—	—	71.91	3.39	8.19	21.52	33.10	41.12	2.31	38.81	—

As the size of the farms increases the gross return, farm expenses, and social revenue, per hectare decline. The return on capital was largest in the case of farms of 30 to 50 hectares.

In order to produce 100 crowns of social income, farms in the Walga, Wiljandi, Pärnu, and Lääne districts required a higher gross return than farms in other districts because the working costs per 100 crowns of social income were higher; it was mainly in milk production that efforts were made to produce a higher gross return. The larger the farm the greater are the working costs per 100 crowns of social income. But on the other hand the larger the farm the greater is the gross return on milk and arable production and the greater the total gross return.

B. — Latvia.

On 15 June 1932 the law concerning the monopoly of imported wheat came into operation. The State alone has the right to import rye and wheat. The Government is obliged to buy home-grown rye and wheat at pre-established prices; for rye this is 21.60 lats per quintal and for wheat, 27 lats per quintal. A monopoly has been created for spirits; the price of potatoes was in 1932 4.80 lats per quintal. On 21 June 1932 Parliament voted a law which fixed the price of butter and pig-meat (see table on page 237).

Social Income, Gross Return, and Farm Expenses, in Estonian Crovns per Hectare and as a Percentage of the Social Income.

Description	Slaughter stock	Milk	Pigs	Vegetable pro-duction	Other branches	Total	Working costs	Social income	Taxes	Wages	Net return
The whole country.	3	14	10	22	23	72	29	43	1	43	1
Tartu.	6.98	32.56	23.25	51.16	53.49	167.44	67.44	100	2.32	100	2.32
Woru.	5.45	16	13	28	30	90	35	55	2	55	2
Wiru.	6	28	8	50.91	54.55	163.64	63.64	100	3.64	100	3.64
Jarwa.	3	14	16	24	30	79	29	50	1	51	2
Karju.	3	16	9	48	60	158	58	100	2	102	4
Walga.	3	34.04	19.15	27	23	78	31	47	1.3	45	0.7
Wiljandi.	3	13	9	57.45	48.94	165.96	65.96	100	2.76	95.74	1.50
Wõlga.	3	28.26	19.57	23	24	72	26	46	2	38	6
Pärnu.	3	18	6	50	52.17	156.52	56.52	100	4.35	82.61	13.04
Lääne.	3	43.90	14.63	18	22	67	26	41	1	39	1
Saaremaa.	7.32	35	22.50	43.90	53.66	163.41	63.41	100	2.44	95.12	2.44
Farms of less than 20 hectares	7.50	14	9	60	55	180	80	100	2.50	112.50	15
Farms of 20-30 hectares	3	15	11	19	18	66	27	39	1	39	1
Farms of 30-50 hectares	7.69	38.46	28.21	48.72	46.15	169.23	69.23	100	2.56	100	2.56
Farms of more than 50 hectares	8.11	40.54	24.32	51.35	51.35	175.67	75.67	100	2.70	108.11	10.81
	3	15	7	17	22	64	31	33	1	40	8
	9.09	45.45	21.21	51.52	66.67	193.94	93.94	100	3.03	121.21	24.24
	2	7	4	15	16	44	16	28	1	27	0
	7.14	25	14.29	53.57	57.14	157.14	57.14	100	3.57	96.43	0
	4	22	15	35	38	114	43	71	1	72	2
	5.63	30.99	21.13	40.29	53.52	160.56	60.56	100	1.41	101.40	2.81
	3	14	10	22	22	71	27	44	1	44	1
	6.81	31.82	22.73	50	50	161.36	61.36	100	2.27	100	2.27
	3	13	8	19	18	61	24	37	1	35.6	0.4
	8.11	35.13	21.62	51.35	48.65	164.86	64.86	100	2.70	96.22	1.08
	2	10	6	15	14	47	20	27	1	28	2
	7.41	37.04	22.22	55.55	51.85	174.07	74.07	100	3.71	103.70	7.41

Prices of Agricultural Products in Lats.

Regions	Wheat (Quintals)	Rye (Quintals)	Barley (Quintals)	Oats. (Quintals)	Potatoes (Quintals)	Slaughter stock (per head)	Pig-meat (Quintals)	Milk (Kg.)
Livonia . . . 1931-32	27.27	22.23	15.30	12.60	5.33	114	116	0.14
1932-33	25.85	21.78	13.89	9.84	4.31	50	58.86	0.10
Courland . . . 1931-32	22.76	19.49	14.53	11.84	5.04	115	109.50	0.13
1932-33	24.60	20.94	13.84	9.77	3.72	51	60.75	0.10
Zemgale . . . 1931-32	21.88	19.73	15.21	12.56	5.23	137	116	0.14
1932-33	23.86	20.88	13.73	9.84	4.13	59	60.16	0.10
Latgale . . . 1931-32	22.74	18.63	13.88	11.51	4.62	123	109	0.16
1932-33	23.58	20.24	13.09	8.99	3.64	55	60.99	0.12

Physical Returns from Annual Production, per Hectare.

Regions	Wheat (Quintals)	Rye (Quintals)	Barley (Quintals)	Oats (Quintals)	Potatoes (Quintals)	Hay from grass- lands (Quintals)	Milk (Kg. per cow)
Livonia 1931-32	10.47	7.37	11.43	11.25	125.60	22.95	2,385
1932-33	13.05	13.48	10.22	9.74	123.87	20.75	2,438
Courland 1931-32	10.51	8.30	11.42	10.82	120.26	20.40	1,932
1932-33	14.32	14.37	11.20	10.74	133.49	19.40	2,120
Zemgale 1931-32	11.08	7.32	12.11	12.01	120.31	22.70	2,322
1932-33	15.28	13.16	12.50	10.74	110.87	23.10	2,125
Latgale 1931-32	7.51	6.03	8.35	8.41	96.17	20.35	1,654
1932-33	10.54	10.60	9.02	8.91	97.81	19.59	1,822

The physical output was higher in 1932-33 than in 1931-32 with the exception of barley and oat production in the Livonia district. The output of milk per cow fell in the Zemgale district in spite of an output of hay greater than that of the previous year. In 1932-33 the farmers sold larger quantities of cereals, produced more milk and increased their cattle and pigs herds, as can be seen from the following figures:

Gross Return: Quantities per Hectare.

	Cereals (Quintals)	Potatoes (Quintals)	Cattle (Heads)	Milk (Kg.)	Pig-meat (Kg. live Weight)
Livonia 1931-32	0.68	0.64	0.053	258	11
1932-33	0.94	0.51	0.110	375	23
Courland 1931-32	1.03	1.18	0.055	171	11
1932-33	1.38	1.51	0.093	277	28
Zemgale 1931-32	1.61	0.46	0.049	295	13
1932-33	1.74	0.56	0.108	382	24
Latgale 1931-32	0.90	1.11	0.036	141	10
1932-33	1.17	0.94	0.104	183	17

This increase of sales allowed the farmers of the Livonia, the Courland, and the Latgale districts to obtain in 1932-33 a gross return in lats greater than that in the previous year. The greatest increase of value occurred in the growing of vegetable products. The slight fall in the total gross return in the Zemgale district was the result mainly of a considerable fall in the gross return from dairy products.

Working costs fell much more considerably than did the gross return; social income appreciably increased. Other expenses (labour and interest on debts) also fell heavily so that the return on family capital, and the farmer's income, increased.

On farms in the various size groups the same tendencies can be seen in spite of the slight fall in the total gross return on farms having an area of 20 to 50 hectares and of more than 50 hectares, the social income, the family capital return, and the farmer's income, increased considerably as a result of the fall in farm expenses.

C. — Lithuania.

In 1932-33 the Government provided in the budget a sum of 14,400,000 litas to be used to maintain the price of pig-meat, a sum of 6,300,000 litas to keep up the price of butter, and a sum of 70,000 litas to keep up the price of wheat. The price of cereals was fairly easily maintained at its previous level but the prices of animal products fell considerably in spite of the measures taken by the Government.

Prices of Agricultural Products: in Lit.

Wheat (quintals)	1931-32	13.70
	1932-33	14 —
Rye (quintals)	1931-32	12.60
	1932-33	12.30
Barley (quintals)	1931-32	11.30
	1932-33	10.40
Oats (quintals)	1931-32	10.20
	1932-33	9 —
Potatoes (quintals)	1931-32	3.75
	1932-33	3.20
Beef (kg live weight)	1931-32	1.65
	1932-33	0.85
Milk (kg)	1931-32	0.32
	1932-33	0.25
Pig-meat (kg. live weight)	1931-32	2.15
	1932-33	1.45

The fall in the prices of cattle and of animal products put the Lithuanian farmers, in 1932-33, in a bad position which was aggravated by the burden of agricultural indebtedness. Production and export of milk and dairy products did not increase as much as in previous years. In 1932-33 the exports of butter amounted to 9,930 metric tons and had a value of 42 million litas against 8,700 tons with a value of 47 million litas, in 1931-32; cheese exports reached 790 tons having a value of 2 million litas against 1,136 tons with a value of 3.5 million

litas, in 1931-32; meat exports reached 34,910 tons against 29,660 tons in 1931-32; the number of exported eggs was 46 millions against 61 millions in 1931-32. However, the growth of the population of the towns increased home consumption so that there was no fall in production except in the case of dairy products.

Quantitative Gross Return.

Cereals (quintals)	1931-32	2.78
	1932-33	2.70
Potatoes (quintals)	1931-32	2.01
	1932-33	2.58
Beef (kg. live weight)	1931-32	4—
	1932-33	9—
Milk (kg)	1931-32	151—
	1932-33	117—
Pig-meat (kg live weight)	1931-32	34—
	1932-33	36—

As a result of the decrease in the output and of the decline in the prices of milk and its products, and as a result, further, of the fall in the return on production classed under "other branches" the total gross return in litas was smaller in 1932-33 than in 1931-32. This fall in gross return was reflected in the social income since working costs did not fall to the same extent. Family capital return, however, increased appreciably; wages were reduced by almost 50 per cent. The farmer's income, which also increased, was higher relatively to the social income than in 1928-29.

Value, in Lats per Hectare and as a Percentage of Social Income.

Size of farms	Gross Return					Total
	Breeding Stock, Slaughter Stock, etc.	Milk	Pigs	Vegetable production	Other branches	
5 to 10 hectares	10	54	76	83	89	312
	4.69	25.35	35.68	38.97	41.79	146.48
10 to 20 hectares	8	39	54	65	58	224
	5.44	20.53	36.73	44.22	39.46	152.38
20 to 50 hectares	6	29	42	52	47	170
	5.13	24.79	35.90	44.44	40.17	150.43

Size of farms	Working costs	Social income	Taxes	Labour costs	Net return
5 to 10 hectares	99	213	9	185	10
	46.48	100	4.23	86.85	8.92
10 to 20 hectares	77	147	8	125	14
	52.38	100	5.44	85.03	9.53
20 to 50 hectares	59	117	8	101	8
	50.43	100	6.84	86.32	6.84

The preceding table shows the respective positions in 1932-33 of farms in various size groups.

Obviously, this table confirms what has already been said; namely, that the gross return and the social income per area unit are the larger the smaller is the farm; in other words the more general is small scale farming the denser is the population that can be supported. The costs of labour per 100 lats of social income, and, less exactly, the working costs per 100 lats of social income are the same in 1932-33 in Lithuania on farms belonging to the three size groups. In order to produce a hundred lats of social income farms of 20 to 50 hectares had to obtain from arable farming a higher gross return than did farms of 5 to 10 hectares since they had a lower subsidiary income from dairy products.

D. — Poland.

The Government took measures to prevent a too severe fall in the price of agricultural products, to lower costs of agricultural production, and to facilitate the adjustment of agricultural production to the unfavourable conditions produced by the crisis. It protected the home market and maintained a system of import duties and export bounties. Import duties on butter were increased from 12 zlotys 50 gross. to 200 zlotys per quintal. Trade in butter and dairy products was made the subject of State regulation on 12 December 1932. Various measures were taken to facilitate the repayment of debts. Between 1931-1932 and 1932-33 exports of agricultural products fell in weight by ten per cent and in value by a fifth. This decline in export trade exercised a depressing influence on the prices of agricultural products which the State was trying to maintain.

Prices of Certain Agricultural Products, in Zlotys.

	1931-32	1932-33
Wheat (quintals, on the farm)	24.95	25.80
Rye (quintals, on the farm)	22.94	16.36
Barley (quintals, on the farm)	20.23	14.48
Oats (quintals, on the farm)	20.87	13.60
Potatoes (quintals, on the farm)	5.05	3.63
Beef (kg live weight, Warsaw)	0.78	0.67
Pig-meat (kg live weight, on the farm)	0.94	0.86
Milk (quintals, on the farm)	0.21	0.17

The only price that rose was that of wheat. The fall was particularly heavy in the cases of milk, rye, barley and oats.

The output of cereals and potatoes was greater than in 1931-32 with the exception of the output of wheat. Rust appeared shortly before the harvest and it is necessary to go back ten years in order to find a wheat harvest as bad as that of 1932. Fodder crops did not yield a satisfactory return.

Grass lands yielded 19.55 quintals of hay in 1931-32 and 18.31 quintals in 1932-33.

Cattle and pig production was greater in 1932-33 than in 1931-32. Except in the West and on farms of 10 to 15 hectares and of 15 to 30 hectares more milk was produced in 1932-33; the sales of cereals and of potatoes together were greater than in 1932-33.

Return on Arable Products: Quintals per Hectare

Regions		Wheat	Rye	Barley	Oats	Potatoes
South	1931-32	13.07	12.02	13.92	13.50	171.16
	1932-33	8.25	13.35	14.98	14.11	153.84
East	1931-32	10.04	8.65	10.94	8.74	127.21
	1932-33	7.50	9.33	12.19	10.05	113.77
Centre	1931-32	13.66	11.85	14.56	12.54	154.16
	1932-33	10.92	12.67	15.59	13.62	151.07
West	1931-32	15	12.73	14.38	14.86	136.97
	1932-33	15.71	15.75	18.52	17.49	145.10

Gross Return: Quantities per Hectare.

Description		Cattle (Kg. Live Weight)	Milk (Kg.)	Pigs (Kg. Live Weight)	Cereals (Quintals)	Potatoes (Quintals)
South	1931-32	23	406	37	3.72	3.58
	1932-33	25	453	35	3.42	3.97
East	1931-32	6	148	19	1.64	1.96
	1932-33	9	150	23	1.83	2.44
Centre	1931-32	10	243	39	3.23	3.84
	1932-33	20	262	50	3.60	4.20
West	1931-32	21	300	52	3.77	3.19
	1932-33	29	367	62	4.56	3.85
Farms of 2 to 5 hectares	1931-32	25	547	43	3.50	4.82
	1932-33	28	565	45	3.47	5.42
Farms of 5 to 10 hectares	1931-32	15	311	37	3.57	3.91
	1932-33	24	323	43	3.84	4.75
Farms of 10 to 15 hectares	1931-32	15	294	42	3.14	3.18
	1932-33	19	267	44	3.11	3.31
Farms of 15 to 30 hectares	1931-32	12	220	35	2.99	2.34
	1932-33	16	212	41	2.94	2.27
Farms of 30 to 50 hectares	1931-32	12	157	24	2.61	1.54
	1932-33	18	178	33	3.18	1.72

The fall in the gross return in 1932-33 was due almost entirely to the decline in prices; the output from milch cows and from arable farming was the least satisfactory.

The social income was lower in 1932-33 than in 1931-32 in the South, at the same level in the East, and higher in the Centre and in the West. The reason for this is that while gross return fell, working costs did not fall in the South. On the other hand working costs declined appreciably in the East, still more in the Centre, and to an even greater extent in the West, as the following figures show (see table on page 242).

Family capital return and the farmer's income fell in 1932-33 in the South, and increased in the other three regions.

The social income was smaller than that of 1931-32 in the case of farms in the first four of the size groups shown below and greater for farms in the last

Working Costs as Percentage of Gross Return.

	1931-32	1932-33	Decline	
South	34.8	34.7	—	0.1
East	29.9	25.3	—	4.6
Centre	35.2	28.8	—	6.4
West	49.7	41.4	—	8.3

size group. The falls in working costs as a percentage of the fall in the gross return were as follows:

Farms of 2 to 5 hectares	59 $\frac{9}{10}$
Farms of 5 to 10 hectares	64 $\frac{9}{10}$
Farms of 10 to 15 hectares	58 $\frac{9}{10}$
Farms of 15 to 30 hectares	86 $\frac{9}{10}$
Farms of 30 to 50 hectares	287 $\frac{9}{10}$

Family capital return increased for farms in all the size groups; the farmer's income increased for farms from 10 to 15, 15 to 30, and 30 to 50 hectares. On farms of 2 to 5 hectares and 5 to 10 hectares the interest on debts fell very slightly; the remuneration of family labour fell much more than the costs of hired labour. On farms of 10 to 15 hectares and 15 to 30 hectares the fall in the cost of hired labour and interest on debts was much greater than that of the remuneration of family labour. Finally, on farms of 30 to 50 hectares the raising of the interest on debts and of taxes was less than that of the social income.

E. — Czechoslovakia.

For technical reasons the Accountancy Office in Prague has not given us figures for the composition of the gross return and of the working costs of the farms which it surveys; our study of this country will therefore be less complete than that of other countries.

In 1932-33 the economic position of the Czechoslovak farmers was unsatisfactory in spite of assistance from the Government, from political and professional organisations, and from co-operative societies. The prices of agricultural products fell considerably with the exception of the prices of cheese, eggs, and pig-meat.

Prices of Agricultural Products, in Czechoslovak Crowns

	1931-32	1932-33
Wheat quintals	148 —	154.20
Rye "	145.70	99.35
Barley "	116.50	84.50
Oats "	119.90	78.90
Potatoes for human consumption "	34.60	29 —
Butter "	2,158 —	1,977 —
Eggs (100's) "	58.25	66.05
Beef "	844 —	775 —
Pig-meat "	914 —	1,031 —

The difference between the level of the prices of agricultural products and that of the prices of industrial products increased.

	1931-32	1932-33
Index for agricultural products	589	510
Index for industrial products	857	829

The figures for social income seem to show that the position of Czechoslovakian farmers improved in the East and got worse in the West. Exception must be made for farms producing forage crops; the Eastern group of farms consists of only 8 farms, and on Western farms the interest on debts changed from 47 per cent in 1931-32 to 6 per cent in 1932-33 and this suggests that these farms are not really representative of the group of farms to which they belong. The family capital return and farmer's income from farms in the West and in the East growing cereals and sugar beet are lower in 1932-33 than in 1931-32. In the case of farms in the West and East which grow cereals and of farms on the West which grow sugar beet this is due to the decline in the cost of hired labour and of the interest on debts; in the case of farms in the East which grow sugar beet it is due to the very considerable rise in social income, costs having remained constant.

Summing-up.

In 1931-32 the social income on farms which kept accounts rose:

in Estonia	to 61 $\frac{0}{0}$	of that of 1928
in Latvia	" 50-09 $\frac{0}{0}$	" "
in Lithuania	" 185 $\frac{0}{0}$	" "
in Poland	" 31-50 $\frac{0}{0}$	" "
in Czechoslovakia	" 48-88 $\frac{0}{0}$	" "

In Lithuania bad harvests had seriously disturbed the farmers' position; social income had fallen very low. This explains why the social income in 1931-32 is so high relatively to that of 1928.

From 1931-32 to 1932-33 social income fell in Estonia (where the total gross return fell more than did working costs, in spite of an increase in the gross return from cereals and pigs); in Lithuania (as a result of the fall in the prices of agricultural products); in Poland in the South (where the gross return fell while working costs remained at the same level as in 1931-32), and on farms of 2 to 30 hectares (where working costs fell less than did the gross return); in Czechoslovakia in the West and on farms producing forage crops in the East.

Social income rose in Latvia (where the working cost fell less than did the gross return); in Poland on farms in the Centre and the West and on farms of more than 30 hectares, for the same reasons; finally, in Czechoslovakia on sugar beet farms in the East.

From this and the preceding articles it appears that in spite of their efforts governments everywhere were hardly able to maintain in 1932-33 an equilibrium between the prices of agricultural products and those of industrial goods, favourable to the farmers.

J. DESLARZES.

THE CANADIAN ROYAL COMMISSION ON PRICE SPREADS

CONTENTS: I. *Introduction.* — II. *The problem of monopolistic organisation in Canada.* — Growth and effect of imperfect competition on the farmer. — III. *Conclusion.*

I. — Introduction.

On 2 February 1934 the Canadian House of Commons adopted a resolution, containing, among other terms, the following: "That a Select Special Committee of eleven members of the House be appointed to inquire into and investigate the causes of the large spread between the prices received for commodities by the producer thereof, and the price paid by the consumers therefor; and the system of distribution in farm and other natural products, as well as manufactured products and... to inquire into and investigate:—

"the effect of mass buying by department and chain store organizations upon the regular retail trade of the country, as well as upon the business of manufacturers and producers...

"the relation between the flour milling industry and the bakeries of the country...

"the methods and system prevailing in the marketing of livestock and animal products for domestic consumption and export, and the extent to which the present system affords or restricts opportunity for fair returns to producers."

The Committee was given extensive powers to call witnesses, examine documents and records and to make investigations on its own behalf.

On 9 April 1935 the Commission (the Committee had in the meantime become a Royal Commission) submitted its report (1), 10 members signing—3 with reservations—whilst one member made a separate minority report.

The Report is of even wider interest than its limitation to Canadian problems suggests; for it deals with one of the most important aspects of the relation between industry and agriculture, namely, the exercise of monopolistic influences by industry both in buying the products of farmers and in selling to them the products of industry. The world agricultural crisis has been marked, in the legislative field, by an attempt to organise the marketing of agricultural products in such a way as to lessen the disability of the farmer in facing, single-handed and individualistically, the monopolistic tendencies of modern history. The late stages of industrial capitalism reached before the great war saw the endeavour of labour to overcome similar disabilities through collective organisation—trade unions, labour guilds, etc. Agriculture, indeed was slow to follow. The world depression however was characterised—in almost all countries—by a far greater fall in agricultural prices than in industrial prices and in the cost of living; in consequence, farmers the world

(1) Report of the Royal Commission on Price Spreads. Ottawa 1935.

over tended to be particularly hard hit. Trends in industrial policy were not conducive to a remedy of the farmers' situation through reduction of industrial prices. In consequence, endeavours of all kinds were made to oppose to relatively inflexible industrial prices correspondingly inflexible agricultural prices. The means adopted varied according to the character of the country and products, tariffs, regulation of imports and collective marketing being the more important. Most of the measures involving compulsory marketing organisations were evolved at fairly late stages of the depression—in Great Britain in 1932, in the United States in 1933. In Canada, the divergence between agricultural and other prices was particularly great. Whereas the general index, based on 1926, had fallen to 67 in 1932, in the case of farm products the index had fallen to 48. Only in 1934 however was the Natural Products Marketing Act, designed to facilitate collective bargaining on the part of farmers, passed. Under this Act marketing schemes were evolved in almost all branches of Canadian agriculture, though not in wheat, which was affected by other measures. It should be noted that with the principal exception of wheat by far the greater part of Canadian agricultural produce is consumed in Canada, as follows:—

	Domestic consumption as percentage of production in 1933
Wheat	35.9
Dairy products	95.4
Butter	98.5
Cheese	31.4
Cattle (Beef and Veal)	95.0
Hogs	90.8
Eggs	99.1
<i>Fruit:</i>	
Apples	31.0
Peaches	100.0
Strawberries	99.3
<i>Vegetables:</i>	
Potatoes	96.0
Turnips	97.3
Sugar-beets	96.9

Thus, apart from the problem of wheat, Canadian farmers must be particularly interested in the domestic organisation of the agricultural market, and a thorough investigation of this question can evidently be of interest to farmers in other countries in which the domestic market is of outstanding importance. Though few countries indeed have reached the advanced stage of industrial organisation to be found in North America, the Canadian Report can be of interest to most countries, in that it indicates essentially modern tendencies which can conceivably operate elsewhere but which, in order to be beneficial, must be foreseen and controlled to some degree in advance.

In its detail the Report deals with a variety of subjects, of direct, indirect and remote interest to agriculture. It is divided into nine chapters, the first three of which deal with the character of monopoly in general and as it manifests itself in Canada; the fourth with nine industries, six of which are of consequence to farmers and which depend on the farmer either as a supplier

of produce or as a buyer of industrial goods; the fifth with labour and wages; the sixth with the primary producer; the seventh and eighth with distribution and the consumer and the last with the problems of State control and with recommendations.

II. — The Problem of Monopolistic Organisation in Canada.

The dominant form of industrial and commercial organisation of Canada today can be regarded neither as perfectly competitive nor as completely monopolistic, but rather as the intermediate form known as "imperfect competition." "This condition, which is more characteristic of our present economy than complete monopoly, exists when the output of any one producer or purchaser is a significant proportion of the total supply marketed, that is, when one producer may affect the price by withholding his supply." In the view of the Majority of the Commission, certain consequences result: "Price no longer automatically adjusts itself to supply and demand.... the dominant producers fix the price they deem most profitable and attempt to adjust their production to sales at that determined price...." "Where imperfect competition prevails, a definite market price is not determined by supply and demand; price may be set anywhere within the limits of a zone of indeterminateness.... in accordance with the relative bargaining power of the parties concerned." "Unfair competitive practices develop.... there is.... a strong disinclination to enter into any serious price competition because there is a strong sentiment against spoiling the market. But there is, at the same time, a strong urge to increase sales so as to make some use of idle plant, and reduce the heavy overhead costs typical of modern industry. This urge to increase sales without serious price reduction is often the explanation of the intensified competition which breeds unethical practices...." "The bargaining advantage of strong organized groups may lead to the exploitation of the weak and unorganized.... In an effort to avoid such exploitation, workers have organized trade unions and governments have enacted minimum wages laws. But there are groups of self-employed primary and small secondary producers who remain subject to such exploitation, all these circumstances unbalance modern economic society in the sense that not all of its parts adjust themselves at the same speed or in the same degree to any influence that makes itself felt at one point. Necessary readjustments are therefore concentrated on the flexible sections of our economy where their effect is intensified by the rigidity in other sections." An illustration is offered by the indices of prices and production in the agricultural implements industry and in agriculture, as shown in the table opposite. In the former case, prices hardly fall as a result of the monopolistic organisation of the industry. In consequence production falls by 86.4 per cent. In the latter case, prices fall by nearly 50 per cent. whilst production actually increases.

The effect of monopolistic organisation in industry on the primary producer is brought out by the investigations of the Commission into the meat packing, fruit and vegetable canning, tobacco, agricultural implements and fertilizer industries.

Year	Agricultural Implements		Agriculture	
	Prices	Production	Prices	Production
1929	100.0	100.0	100.0	100.0
1930	98.8	72.8	81.6	101.9
1931	98.8	19.2	55.9	97.9
1932	97.3	9.0	48.0	113.1
1933	93.6	13.6	50.6	104.0

The meat packing industry is one of the largest Canadian industries. Indeed measured by the gross value of output it was the third largest industry in 1932 but measured by the value of materials used it was actually the first Canadian industry. It can easily be seen therefore that it is an industry of vital importance to the farmer in general and the livestock producer in particular. This industry, which works under conditions of large scale production, is dominated by two concerns which together accounted in 1933 for 85 per cent. of the total production. During the years of depression the industry was able to maintain its profits despite a tremendous decrease in the value of its output. In spite of a decline in the value of production amounting to 50.9 per cent. between 1929 and 1933—a larger decline than in the value of production of industry as a whole—the value added by manufacture declined only by 24.5 per cent. The cost of materials, roughly corresponding to the sum paid the livestock producer, declined however by 56.8 per cent. This situation is different from that in industry as a whole, for there the value of production declined by 47.2 per cent. and the value added declined by 41.4 per cent.—in other words, a far greater proportion of the decline in the value of production was due to the decline in the value added, or in returns to industry, and less to the decline in the returns to the primary producer. In the meat packing industry in 1929 “for every dollar’s worth of meat sold 81.7 cents went to the suppliers of materials; in 1933 however, although the consumer’s dollar purchased approximately 80 per cent. more meat than in 1929 out of each dollar the producer received only 76.3 cents and the packer 23.7 cents.”

In the view of the Commission, this specially privileged position of the meat packing industry has a direct relation to the monopolistic character of the structure of the industry. “The dominant position of the two large companies.... has undoubtedly secured for them some measure of control over both livestock prices and selling prices for their product.”

The result of the economic depression on the livestock producer undoubtedly tended to be accentuated by his relatively weak bargaining position with the buyer of his product. The power exercised by the two leading meat packing companies reflects itself in the organisation of marketing in the crisis years. Before the concentration of the industry in a few hands, livestock was largely disposed of in public stock yards, set up by the Departments of Agriculture, in which sellers and buyers, of which there were sufficient numbers to make the market

really competitive, met together, a competitive market price, reflecting the prevailing conditions of supply and demand, resulting. "In recent years, this situation has completely changed.... livestock purchasing.... is concentrated, with a result, as our evidence shows, of lack of price competition among packer-buyers. From evidence given to the Commission it appeared that the large buyers often arranged amongst themselves, before the opening of the market, the prices they would offer, and other evidence revealed that once a buyer had made an offer, either on the ranch or in the stock yards, other buyers would not go above this. These circumstances have naturally led to a weakening of the attraction of the stock yard to the livestock producer, and have made it easier for the packing companies to develop a system of direct deliveries, which places in their hands even greater possibilities of control of the price paid to the producer. Under this system stock is transported directly from the ranch to the packing plant, where it is weighed and graded by the packer himself. The open market tends thus to disappear. The producer, in effect delivers his live stock to the packer and trusts that he will be treated fairly, as to weight, grade and price. "In these circumstances, it is not difficult to see who is in the strong and who in the weak position." The packers pay, indeed, the market price. But since they themselves do not seriously compete on the open market, and since they are increasingly obtaining supplies by direct shipment, it is clear that the "market price" is itself largely fictitious. "These direct shipments therefore, have the effect of breaking down the price upon the public stock yards, and when this price has been so broken down to a satisfactory level to the packer, then he secures his necessary supply. Not unnaturally it follows that on a slow or draggy market, prices are easily depressed."

The growers of fruits and vegetables, who form an important part of the agricultural population in Ontario, Quebec and British Columbia, appear to be at a similar disadvantage as the live stock producers in their dealing with the buyers. This industry is again dominated by a small number of large concerns, whose policy and methods do not work favourably to the producers. The amount paid by the industry to the growers is only a relatively small proportion of the sales value of the canned goods. The grower's share of prices received from the largest canning company during 1933 averaged, for eight products, 18 per cent. From 1929 to 1933 the percentage of the selling price of canned tomatoes—the most important of the canned goods—going to the grower varied each year as follows.

1929	19.4	1932	17.9
1930	24.5	1933	16.8
1931	23.3		

The largest elements in the canner's costs include the cans themselves, which averaged in these years between 22 and nearly 29 per cent. of the total cost, and labour. Fixed or overhead costs are particularly high, reflecting the unsound financial structure of the industry which is "characterised by over-expansion resulting in surplus capacity, an illusory capitalization of companies, a fierce struggle on the part of the largest companies to maintain and increase

their position at the expense of the smaller, and an equally intense effort on the part of these smaller companies to survive in the face of this struggle."

It is noted in the Report that in 1933, the year in which the lowest price was paid for tomatoes, the largest company gave a bonus to holders of Second Preferred Stock "the major portion of which was owned or controlled by the officers and directors of the company." Further in each of these years, as a result of the intensified competition quoted, the average selling price of canned tomatoes was below cost, indeed, strikingly so. "The sale of tomatoes constantly below cost has not only had a demoralizing effect throughout the trade in general but has helped to depress prices to the producer."

	Average selling price of 1 doz. cans tomatoes \$	Average cost of 1 doz. cans tomatoes \$
1929	1.312	1.353
1930	1.175	1.285
1931 . . . . .	.81	1.184
1932 . . . . .	.84	1.217
1933 . . . . .	.84	1.189

The superior influence of the large industry company over the primary producer is evidenced by the way in which dealings are carried out. The selling transaction is generally governed by a written contract which among other things deals with "the acreage to be planted, the supply of suitable seed, the report of crop conditions, the maximum quantities of produce per acre that is to be accepted, the quality of produce, penalties for lack of quality, the dates for beginning and ending delivery, limitation of deliveries, price to be paid for the produce and the terms of payment." The grower has very little to say in the preparation of the contract which is a document.... "drawn up primarily for the protection and in the interests of the canning company." "The grower appears in general to be dissatisfied with the contract." "It is contended on behalf of the growers that the contract is all in favour of the company; that under it the grower was bound to deliver, but that the canner may escape its terms, and either not accept amounts stipulated or vary them according to his interests. No provision is made for arbitration and the canner is the sole judge as to quality, delivery time, and conditions permitting limitation of deliveries. There was the further contention that whatever the form of contract may be, the grower's financial position is such that he is often obliged to accept it, even at prices below production costs." Recently, clauses have also been inserted in these contracts prohibiting growers from supplying other than the contracting canning companies. Very often, in consequence, the grower is left with large quantities of produce on hand at the end of the season, which the large canning firm does not want and which the grower is prohibited from selling unless he can afford to lose his largest customer.

Another illustration of the weakness of the farmer is provided by the practice of "dockage" by the canner for damaged goods, or goods not reaching the stipulated quality or weight. "Dockage" is a reduction from the delivered weight to compensate for goods not up to standard. In this regard the canners

are accused by growers of using this practice unfairly. The Commission however was "unable... to come to any conclusion as to whether dockages generally have been excessive or unfair...." Nevertheless disputes between growers and canners in this question were frequent, and in consequence both are reported to have been satisfied when in 1934 inspectors of the Federal Department of Agriculture were stationed at canning factories to check each delivery of tomatoes for quality, grading and weight.

In its conclusions on this industry the Commission recommended that the machinery of the Natural Products Marketing Act should be utilized "for the purpose of concluding an arrangement that will ensure for the grower a more reasonable price for his product than he now receives." Under the Act a number of marketing schemes affecting the wide range of vegetables and fruits were set up in the various Provinces in which they are important.

A third example of the power of the large industrial concern over the unorganised farmer is that of the tobacco industry. Once again in the words of the Report: "Possibly the clearest example of exploitation of the primary producer that came before us was that provided by the relationship between the tobacco manufacturers... and the tobacco grower during the period preceding 1934. This example also provides an excellent instance of the degree to which a monopolistic buyer can disturb the ordinary workings of economic law in the fixation of prices." In this industry one company accounts for 70 per cent. of the production and "has been in a position to manipulate raw material costs and to sell its product in a sheltered market at prices showing little variation from year to year." The profits of the largest company during the depression years were large, dividends alone in these years amounting to \$26.9 million, in an industry the total annual value of the production of which amounted to (less excise duties) \$37 million in 1933. "In contrast, the growers, dealers, a majority of the manufacturers, the wholesaler and the retailer have been faced with meagre profits, or in some cases, absolute losses." Previous to 1930, high tobacco prices had stimulated a large increase in production, which proved in the following years to be the "basic cause of distress among producers." In 1930 the price reached its highest level of 32 cents, which resulted in 1931 in an increase in the planted area from 17,000 to 27,000 acres, production increasing from 12.4 to 24.5 million pounds. The situation in 1931 and 1932 is described in the Report as follows. "On the side of the producer there was lack of adequate information as to general market conditions and crop values, inability to adjust output to demand and lack of effective marketing organisation. In turn the manufacturer used the power that comes from monopolistic control to limit domestic competition, and high protective tariffs restricted the competition of manufactured goods from abroad. The combination of weakness on the part of the grower and power on the part of the buyer made it possible, if not easy, for the (largest company) to force prices to the lowest point in the 'zone of indeterminateness' to the consequent distress of the producer."

The largest company began its buying operations in October 1931 with a maximum price of 30 cents the buyers being instructed to reach an average of 22 to 23 cents. In view of the large production the head offices of the company

in New York held the opinion that prices should be about 25 per cent. below those of 1930. However, "a new company official was sent from Montreal to take charge of buying operations and as a result of his tactics, prices were driven ruthlessly down and both buyers and producers were demoralized. The final result of buying operations was that the crop was purchased at an average price of about 21 cents. as compared with 32 cents in 1930."

"An examination of the crop inspection books of this Company clearly shows that deliberate advantage was taken of conditions to break the market. After the first week, the prices bore little relation to relative quality on the basis of the 30 cent top. Crops valued at 25 cents on that basis were bought for 5 to 18 cents. This was in sharp contrast to the buying policy in previous years, and was made possible by the fact that the growers were completely at the mercy of the buyers."

In the hope apparently of recuperating their losses of 1931 the growers once more expanded their production, and the crop increased by 12.7 per cent. In the view of the Commission it was "quite apparent that advantage was again taken of conditions surrounding the marketing of the crop unduly to depress the price. Apprehension and subsequent panic was caused amongst the growers by, first, unnecessary delaying the opening of the market and later, by deliberately slowing down buying operations." In fact, the Report notes that the largest company delayed the opening of the market by three weeks compared with the previous year though the crop matured two weeks earlier. In 1931 the company had made 87 per cent. of its total purchases in the first two weeks. In 1932 it made only 53 per cent. of its purchases in the corresponding period; "we are forced to the conclusion that the deliberate motive was to increase the anxiety of the growers. By so doing, the growers would be in a submissive frame of mind which would facilitate the forcing of prices to the lowest possible level." Prices for this season averaged 20 per cent. below those of 1931.

In 1933 marketing was even slower, only 60 per cent. of the crop being sold after six weeks. The Ontario Government however gave financial assistance to the operations for packing and prices actually improved, also in part as a result of prospects of a shorter crop in the following season. "The panic conditions of the two previous years were absent from the 1933 markets. This was due to the strongly organized position of the growers backed by the financial support of the provincial government. In other words the relatively stronger position of the growers prevented the buyers from exploiting them."

In 1934 general conditions contributed in improving the position of the tobacco grower, including a general economic improvement in Canada and a rise in tobacco prices in the United States. But "it is due also to the adoption of a price agreement between grower and manufacturer following upon the inauguration of a tobacco marketing scheme under the provisions of the Natural Products Marketing Act."

We have already referred to the price of the semi-monopolistic agricultural implements industry and its effect on the output of implements and, consequently, on the farmer. A last example of the disadvantage of the farmer with which the Report deals is provided by the fertilizer industry. This industry, though

small, is, by virtue of the nature of its produce and of its price policy, capable of exercising an influence on the farmer out of proportion to its size. This is again a highly concentrated industry, three firms representing 71 per cent. of the capital invested in the industry.

Farmers in Quebec and in the eastern part of the province of Ontario obtain their fertilizer at lower rates than farmers in the western part of Ontario. The difference in prices reflects the differences in price policies pursued by the fertilizer companies supplying those areas. In Quebec and Eastern Ontario the system is to charge the farmer on an f. o. b. basis, so that prices actually vary according to the distance from the plant. In Western Ontario an association of fertilizer manufacturers, which controls the market in this area, quotes only prices on delivery to the farm, which do not differ for farmers at different distances from the plant. "The discrimination in this case is clear, as farmers near one of the fertilizer plants have to pay the same price as purchasers far away." This policy is, in the eye of the Commission, disadvantageous to the agricultural economy. "A system of prices f. o. b. plant would thus mean that certain territories would be the economical market for each plant. Under the system of identical delivered prices, each fertilizer plant is free to seek business anywhere in that section of the Province in which the prices are controlled by the Association. That the prices, under such a policy, tend to be higher than they would have been under competitive conditions is clear from a comparison of Ontario prices with those in Quebec, where prices are quoted on an f. o. b. basis."

"The system of delivered prices... means that the purchaser is compelled to buy with each unit of the commodity a fixed amount of often imaginary transportation." The system also facilitates local price discrimination. "The purpose of such a discriminatory policy is generally to undercut a local producer in his own market and thus put him out of business or force him into a price agreement."

III. — Conclusion.

Thus the Report of the Royal Canadian Commission on Price Spreads provides many excellent examples, which we have amply quoted, of the extent to which the modern large scale monopolistic industrial organisation can exert undue influence over the relatively unorganised farmer, and of some of the methods with which this influence is exerted. One remedy lies in the organisation of the farmer, which has, as we have noted, already been adopted in Canada. (1) The Report indeed provides much evidence in support of those who argue that the chief function of marketing schemes as these have developed in recent years is not the exploitation of the consumer by the farmer but the defence of the farmer against the large scale buyer of his produce which will enable the restoration of conditions more approaching those of true competition; and to establish

(1) It may however be recalled that the Natural Products Marketing Act has recently been declared unconstitutional on appeal to the Judicial Committee of the Privy Council.

true competition to day, not laissez-faire but well thought out State action is called for. The ultimate recommendation of the majority of the Commission was "not only the most complete maintenance or restoration of competition, where that is possible but also gradual, progressive and effective regulation in that growing field of business enterprise where monopoly or imperfect competition will continue inevitably to develop, and, if unregulated, will continue to exploit the primary producer, the wage earner, and the consumer in the shameful ways so often disclosed by the evidence before us..." The report undoubtedly deserves being read in detail by all who are interested in the economic problems of agriculture.

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DISTRIBUTION COSTS AND CONSUMER'S PRICES (I)

CONTENTS: Foreword. — I. Introduction. — II. The normal structure of distribution costs. — III. Factors leading to excessive distribution costs and margins. — IV. Methods of reducing distribution costs.

Foreword.

In October 1936 the Institute was invited by the Mixed Committee on Nutrition at Geneva to collect and analyse material referring to the margin between the prices received by the farmers and those paid by the consumer of more important staple foodstuffs. The Institute commenced this enquiry in January 1937 and the Report (2), which is being published in autumn 1937, contains summaries of important studies on this subject undertaken at various times in many countries. In the report these studies are preceded by an attempt to analyse the nature and size of the margin, the trends thereof, and the possibilities of reducing consumers' prices by action tending to reduce the margin. Since the Report may have a wide interest not only to those interested in the problem of nutrition but also to all interested in agricultural economics it is thought that the following adaptation of the first part may have a special interest for readers of this bulletin.

I. — Introduction.

Even a casual glance at the studies in the first part of the Report is sufficient to reveal that, despite the importance of the subject and the interest which it constantly arouses, very few settled conclusions or principles have as yet been elaborated. However, the placing of the results of many studies made in different countries side by side may enable some contribution to be made to this end. The studies show indeed a great diversity as to the period to which they refer,

(1) In this article, as in the Report itself, the terms "distribution", "distribution costs, or margins" refer in general to all those processes and the costs thereof, through which a given commodity passes on its way from primary producer to consumer. "Distribution" includes therefore not only transport and selling but also the various forms of processing. In a few cases the terms are used in a more restricted sense, excluding processing. It should however always be clear from the text in which sense the terms are adopted.

(2) "Investigations into the Margin Between Producer's and Consumer's Prices of Certain Foodstuffs".

the scope, the method of approach, the commodities treated, the degree to which analytical or statistical treatment prevails, as well as to the greater or less degree of detail. It is therefore evidently impossible to use them to provide direct comparison or contrasts between the different countries. Indeed, direct international comparisons cannot be expected to yield very fruitful results capable, for example, of direct application for the purpose of lowering distribution costs. In each country distribution takes its own particular form. The variations in the distances goods are transported, in transport rates, in the type and cost of labour employed, in the degree of preparation of the goods before they reach the consumer—to mention only a few characteristic differences—are so large as to preclude any direct comparison of value. What is possible however on the basis of an international survey of the type made in the Report is the pooling of common principles and the examination of diversities from which it may be possible to obtain a better general understanding of the nature and importance of distribution costs than from a study of the narrower field of a single country. It is therefore here attempted, on the basis of a perusal of the studies in the Report, to bring out certain general principles relating to the “distributive margin,” reflecting the experience of many countries, which tend to be inherent in the modern systems of the distribution of consumption goods—or more particularly, of foodstuffs. The sections below deal firstly with the normal structure of distribution costs, secondly, with the question of the degree to which, and the reasons for which such costs may be excessive, and thirdly, the possibilities of reducing them, and thereby, to some degree, the price of foodstuffs to the consumer.

II. — The normal structure of distribution costs.

Whatever the method of the organisation of the distribution of goods from the primary producer to the consumer, the process of distribution necessarily involves certain costs which, like the costs of production, must in the long run be met by the consumer. The goods must be collected at the farm, transported and delivered to a selling establishment, and sold. These represent the minimum processes necessary in the distribution of goods from rural to urban areas. Many goods however require preparation or processing of a more or less complicated kind, as, for example, grain for bread, milk for butter and cheese, the meat carcase for the consumer's joint. In most cases, must be added to these primary distribution costs a normal proportion of waste, due to deterioration in transport or normal perishability and loss of freshness, as for example, in the case of vegetables and some fruits, poultry and eggs, and dairy produce and meat.

Different methods of the organisation of distribution bring in further sets of costs, not, of course, necessarily additional since the particular method of organisation may actually be a means of reducing the totality of distribution costs to a minimum. In the world today there are many forms of organisation, but broadly one may distinguish three main forms, namely the method of open marketing, in which goods pass through the hands of whole chains of independent trades, the co-operative form and the large scale private distributing organisation

which is responsible for the whole process of distribution from the farm—which it may even control—to the consumer. Across these main forms may cut numerous other types which have at the various stages of the process something in common with all three. The first type is the commonest of all three, and here again there are many variations, the number of intermediary agents and markets within the same countries, between countries and among the different commodities diverging considerably. The co-operative form may be represented by a single co-operative organisation which engages in the whole process of distribution, or by co-operative organisation on the part of the consumers. No form necessarily excludes competition nor, on the other hand, monopoly or monopolistic influences at some stage of the distributive process. Without at the moment going into the question of the efficiency of the various types of organisation, it is clear that the structure of distribution costs will vary very much with the type of organisation which prevails. Where goods pass the hands of several intermediaries various costs will be incurred which are absent in a unitary form of distribution.

In times of agricultural depression, marked by severe declines in the prices of agricultural products, complaints invariably arise both from the side of the producer and that of the consumer, that the prices of foodstuffs to the consumers fail to reflect the changes in the prices paid to the farmer. Both farmer and consumer lay the blame at the distributor's door and proclaim the necessity for the elimination of the "middleman". Without examining here the justification of the complaint, which rests evidently more on the assumption that the organisation of distribution is inefficient than on its being unnecessary, it is appropriate here to note that, in the light of the foregoing, consumers' prices cannot automatically and to the same degree follow producers' or farm prices. Producers' prices and the costs of distribution may be, and very often are, completely independent of each other. Consumers' prices over the long period reflect both producers' prices and distribution costs. In consequence the higher the proportion of the distribution costs in total costs, the less can consumers' prices reflect farm prices. Thus if distribution costs represent 50 per cent. of the consumers' price a fall in farm prices of 20 per cent. would result—assuming no change in distribution costs—in a fall in consumers' prices of only 10 per cent. On the other hand, if distribution costs represented only 10 per cent. of the producers' price the consumers' price would fall by 18 per cent. In actual practice however only a part of distribution costs remains fixed for a long period; this applies particularly to rents, interest, rates, taxes, freights, and the like. A further part will tend to vary with changes in the quantity of produce dealt with as well as with progress in method or in the nature of the service rendered to the consumer. In consequence, quite apart from the question of middleman's profits, a fall in the producers' price will not be followed by an equal absolute fall in the consumers' price, but more probably a lesser fall—though a greater fall cannot be excluded. Over a short period, further, consumers' prices reflect the prevailing conditions of supply and demand and are quite independent of both production and distribution costs. There is thus no rule of thumb method to determine whether consumption prices respond adequately to the primary producers' prices. A

proper judgement in this respect always requires a detailed investigation into the flexibility of the various distribution costs, a task which—as the study of the Report would show—is none too easy.

A fact which emerges from all the studies in the Report is that distribution costs represent a substantial proportion of the final consumption price of foodstuffs. In the United States they represented 58 per cent. in 1935; in 1932, at the depth of the depression, they reached 67 per cent. In Germany in 1930-31 total processing and distribution costs (calculated however on a different basis) represented 40 per cent. of the value of retail trade in the principal foodstuffs. Though similar figures cannot be quoted for the other countries it is evident from the study of particular commodities that the proportion is generally high. Thus, in Canada, in 1933, the margin between wheat and bread prices represented 82 per cent. of the price of bread. In the United Kingdom, as far back as 1925, nearly 60 per cent. of the price of bread was formed by the expenses other than the costs of flour. In France in 1932 the farm to retail spread on meat could be estimated at nearly 50 per cent. of the retail prices. Even the spread on commodities such as vegetables, which do not require processing, appears to be strikingly high. Thus, in Germany in 1930-31, of the total retail value, about 51 per cent. was accounted for by the intermediate costs. In the cases of eggs and fruit 40 per cent. of the retail value was made up by intermediate costs. In the United States where, as may be noted above, the proportion of intermediate costs are on the average much higher, the spread stood in 1935 at about 80 per cent. in the cases of commodities such as cabbage, carrots and celery, and often at about 70 per cent. in other cases of fresh vegetables. The reason for these high proportions of intermediate costs in the case of these unprocessed goods appears to lie in the fact that owing to their relatively low absolute value it is necessary for traders and dealers to obtain high margins of gross profit in order to make any gain whatsoever. Thus in the United Kingdom the percentage gross profit on vegetables reached in high class stores a figure as high as 331 per cent. in one case. Even in lower class shops the percentage in the case of the some commodity reached 187 per cent. Further, in the case of vegetables a high margin appears inevitable in order to cover losses on waste goods which have lost their freshness and have become unsaleable.

Distribution costs are not only high but appear, over the long period, to be increasing. In general, compared with before the war, distributive margins are higher not only absolutely—an absolute increase can hardly be a matter of surprise in view of the general increase in values compared with before the war—but relatively to production costs. In other words, distribution costs represent a higher proportion of the final consumers' price. From the studies in the Report this is best borne out statistically in the case of the United States. In 1913 and 1914 the margin between the value at the farm and the retail value of 58 foods represented 47 per cent. of the retail value. The proportion was at its lowest at 1917, when it reached 40 per cent. Since then it has fluctuated but after 1929 it never fell below 50 per cent., reaching, as was previously noted, the high point of 67 per cent. in 1932. The same phenomenon is shown in regard to the individual commodities. Thus, in the case of beef, the proportion rose from 36

per cent. in 1930, to 63 per cent. in 1932-34, falling only in 1935 to 55 per cent. The increase in the case of pork products was even greater, the figures for the same years being 20, 27, 36, 58 (in 1932) and 41. Between 1913 and 1935 the proportion in dairy products rose from 45 to 55 per cent.; in white bread from 77 to 83 per cent.; in potatoes from 41 to 58 per cent.

Figures for the other countries, though not so complete, indicate the same tendency. In France whereas the farm price of meat increased between 1912-1914 and 1932 by 275 per cent. the retail price increased by 455 per cent. In Berlin the price of bread increased between 1913 and the first half of 1929 from 28.5 pfennigs per kilogramme to 40.8 pfennigs, an increase of about 43 per cent. whilst the cost of grain only increased from 14.3 to 18.5 pfennigs or about 30 per cent. In Canada between 1926 and 1933 the wheat-bread spread increased from 67 to 82 per cent. of the bread price. This tendency towards a relative increase in distributive margins was indeed in part responsible for many of the enquiries in the post-war years into food prices.

From some of the studies it is possible to gain an idea of the relative importance of the various costs incurred in the different stages of distribution in the various countries, as well as the changes and tendencies therein. The expenses in the production of bread may roughly be divided into four classes—the cost of flour, the cost of secondary ingredients, bakery costs, (including profits), and distributive charges proper. In the United Kingdom in 1923 the cost of flour represented about 63 per cent. of the total costs, the other ingredients 5 per cent., baking costs 15 per cent., and the distributive costs about 17 per cent. As the table given in the survey of the Linlithgow Committee's report shows, compared with before the war important changes had occurred, particularly the increase in distributive costs proper, which in 1914 had represented only about 11 per cent. (1).

In Germany in 1929, the cost of flour represented 57 per cent. of the price of bread of the small Berlin baker, total manufacturing costs 19 per cent., and distributive charges proper 113 per cent. In the United States in 1935-36 the bakers' margin appeared to be much higher representing 71 per cent. of the retail price. Before the agricultural crisis it represented 66 per cent., but, going still further back, in 1919-20 it represented only about 44 per cent. In all countries the wheat-flour spread is much less than the flour-bread spread.

Turning to meat, a table in the section of the Report on France indicates that the wholesale-retail price margin is much larger than the farm-whole-

(1) It may here be noted that though these figures refer to a period many years back they have not lost their general value. In November 1925 the Food Council set up in the United Kingdom in that year recommended a scale of bread prices in relation to flour prices, which was slightly modified in 1930 and 1932. The original scale allowed a price of bread of 9d. per loaf when flour prices were above 40s. per sack and less than 44s. In the Linlithgow Committee's example above, the price of bread averaged 8.95d. and that of flour 42s. 1d. In 1932 the revised scale, necessitated by changes such as the decline in consumption, the increase in paper-wrapped bread, etc. showed a price of 9d. per loaf when flour was above 39s. and not exceeding 43s.

sale margin. Thus in 1932, the price at the farm was estimated at 5.74 francs per kg., the wholesale price 6.95 francs and the retail price 11.27, the two spreads representing respectively 11 and 39 per cent. of the retail price. This is also indicated by the example given of the spread on beef in England; in this case the retailer's gross profit represented somewhat more than one fifth of the farmer's net return, whilst the total margin from farmer to wholesale butcher, which included also the value of the hide and offals, represented only somewhat over one tenth. Again, the figures given in the study of the margins in the vegetable trade in Holland indicate that, here too, the greater part of the distribution costs are incurred at the retail end. Milk indeed appears to be the most important exception to this rule, for the main charges incurred during its journey from producer to consumer are incurred before the retail stage, namely, in sterilising and bottling, functions usually performed by the wholesale distributors.

Individual items in the costs sheet naturally vary very considerably, not only as between different countries, but even in the same locality of a given town. In some bakeries, for example, modern machinery is employed, tending to reduce the proportion of labour costs; in others, hand methods prevail. In all trades the service offered by different establishments varies considerably. Butter may be sold wrapped or unwrapped, milk in bottles or in the housewife's jug. Some retailers may deliver at the door, others sell from stalls in the market place. The preparation of goods may be carried out centrally by a multiple store organisation or at the single retail shop. All these differences, which can be multiplied almost indefinitely evidently, preclude any general statement as to the importance of individual cost items. Nevertheless, it may be noted that the modern tendency—particularly marked in North America but not absent elsewhere—towards a large scale organisation of retail trade, whether in the form of department or multiple stores and consumers' co-operatives, tended to increase the importance of some classes of costs and diminished that of others. The comparison made in the section of the Report referring to Germany between the bread cost structures of a large factory and of a small independent baker is instructive in this regard. Whereas the large baker has a definite advantage in production costs the small baker has an important advantage in distribution costs proper. On the other hand it is also noted in the same connection that a co-operative dealing in bread among its other wares has a net advantage in distribution costs proper owing to the fact that total costs are distributed over many commodities.

One of the reasons why distribution costs proper tend to form indeed under modern conditions a higher proportion of total costs lies not only in the costs of transport and in the higher degree of service but also in the extended use of advertising which has accompanied the growth of the large organisation. And this again has been encouraged by the development of patented goods. Though the large organisation has developed rapidly in the post-war years the fact that it has brought with it many extra costs in the actual selling of the goods may actually act as a check on further expansion. This indeed appears to be the

view held by the Canadian Royal Commission on price spreads, from whose report extracts are given in the section on Canada.

Again, as illustrated particularly in the study of Canadian trade, the large organisation tends to have an advantage in the purchase of the raw material, whether wheat for bread or fruit and vegetables for canning. In some cases large buyers are given concessions as a matter of course, in others they force them from the producers (1); and often, the reorganisation of the marketing of agricultural products under State intervention produces a similar effect.

In concluding this section on the normal structure of distribution costs we may refer to the widely held view that the net profits of the trader are responsible for an important proportion of total distribution costs. Without here going into the theoretical question as to whether such profits are the cause or the effect of high consumers' prices, or whether they are excessive, we may note some of the statistical conclusions with regard to profits made by the authorities studied in the Report. It should be noted that such profits are subject to considerable fluctuations. The practice adopted by many trading associations of maintaining more or less fixed retail prices over considerable periods often leads to high profits when raw material prices are falling, and low profits, or even losses, when they are rising. Secondly, calculations of net profits are particularly difficult in the case of the small retail trader where often they may represent nothing but his own salary, barely sufficient to enable him to meet his ordinary living requirements. This being said, we may note that in France the retailer's profit on meat was calculated, in September 1932, at 8.9 per cent. of the retail price. In bread-making in Berlin in 1929 the profits of the independent bakers were calculated at 9.1 per cent. of the retail price. The Royal Commission on Food Prices in the United Kingdom gave baking profits in 1925 as 8 per cent. of the retail price. Apart from such profits must be added those of the intermediaries in other stages of the distribution process, including not only those of the wholesalers, but in many cases of other intermediaries according to the nature of the particular market, such as the cattle dealer and the slaughterman in the meat, the commission salesman as in the vegetable trade in the United Kingdom. According to the Linlithgow Committee's investigations the vegetable commission salesman obtained 10 per cent. of the selling price, whilst the provincial wholesaler's net profits averaged 1.8 per cent. of their sales. In France in the meat trade the gross profit of the cattle dealer plus the slaughterman's profit plus commission and market charges—a large proportion of which are net profits—amounted to 3.9 per cent. of the retail price. These few examples are obviously insufficient to establish the statistical importance of the intermediaries' profits, nevertheless they suggest that in some cases at least net profits form an appreciable proportion of retail prices.

(1) See also: The Canadian Royal Commission on Price Spreads. *Monthly Bulletin of Agricultural Economics and Sociology*. International Institute of Agriculture. Rome, July 1937.

III. — Factors leading to excessive distribution costs and margins.

From the foregoing section it should not be difficult to see that, under modern conditions, a large proportion of consumers' expenditure necessarily goes to meet not only the expenses of production but also of distribution. Neither this fact, nor the fact that distribution costs tend to increase relatively to production costs, represent in themselves a condemnation of present day economic organisation. Indeed, it may be suggested that such facts are the normal consequence of economic progress, signified by reduced production costs as a result of improved methods and accumulation of capital. In some lines of foodstuffs particularly, the growth of distribution costs in relation to production costs arises as a result of the inelasticity of demand. On a market which does not expand, improved technique evidently leads to the diminution of total expenditure of resources on production. Another mark of economic progress is the improvement in the preparation of goods for the consumer—the pasteurisation and bottling of milk, the wrapping of butter and bread, the preservation of fruit, the presentation in attractive cartons. Similarly improvements in transport facilities lead to the shifting of production areas away from consumption areas and an increase in the distances over which goods are brought from producer to consumer. Again, the growth of urban agglomerations — made possible indeed by the improvement of all forms of transport—leads both to large scale centralised distribution and such practices as delivery of goods at the consumer's door. The fact therefore that society uses more of its resources than before in the distribution of goods may indicate rather an obedience to a normal economic law than the neglect thereof.

On the other hand, however, it is clear that factors may arise which tend to exaggerate the proportion of social resources devoted to distribution both absolutely and relatively; and the studies in Part II often do indicate that in particular cases distribution costs tend to be excessive, not justified either by economic law or by the economic interests of the community. Thus the Linlithgow Committee reported on the basis of its detailed investigations, that " the spread between producers' and consumers' prices is unjustifiably wide. Taken as a whole distribution costs are a far heavier burden than society will permanently consent to bear ". In Germany in 1929 investigations into a number of food markets revealed that retail prices were often higher than justified by costs and that in some cases the faulty organisation of the market made the distribution costs themselves excessive. In the Netherlands a study of the market for market garden produce suggested equally that distribution costs were excessive. In several of the studies in the Report the analysis of the marketing organisation often leads to the conclusion that improvements leading to a reduction of distribution costs are possible. Thus we may cite in example the report on the reorganisation of milk marketing in the United Kingdom, the study of monopolistic organisations in Canada, and of the agreements among bakers and millers in Switzerland. Whilst referring the reader to the Report for the particular causes leading to such conclusions we may consider here in general terms the type of factors leading to excessive distributive margins and costs.

We might perhaps begin with a warning against the view that a given distributive margin is justified, *i. e.*, not excessive, if it is equal to all the costs incurred in the process of distribution. Because such and such costs have been increased, therefore, (it is argued) such and such a margin is justified. This is indeed a view frequently adopted by distributors or distributors' organisations in presenting their case to public authorities for an increase in prices; and usually if the said authority is satisfied with the evidence as to costs, the request is granted. Yet, on some reflection, it should be clear that this view contains an inversion of cause and effect. On a competitive market a producer or distributor must sell his wares at the market price, *whatever his costs*. If the price over a long period does not cover his costs, then it is true he will be obliged to abandon the business. If, on the contrary, it exceeds his costs over a long period, he will find it profitable to expand. In other words, under competitive conditions, it is the price which determines whether the costs are justified, and not *vice versa*. In consequence, though it is necessary for solvency that a business undertaking covers its costs, it is not possible to judge whether prices or margins are excessive or other wise by summing up all the various cost items and noting that prices are greater than this total. Further, even should the total of costs equal the price this too is evidently no indication of the lack of excessiveness or otherwise of the price, or, in our problem, of price margins.

The true criterion of excessive distributive margins may in fact be sought more directly. Margins may be regarded as excessive from a social economic point of view whenever they include cost items which are unnecessary for the performance of the given service *to the degree made appropriate by the relative demand and by the available resources*.

And this irrespective of whether the demand is that determined by consumers' preferences or by another criterion.

It should be clear that whether costs and margins are excessive cannot be established by the study of the statistics in the Report as much as by a consideration of the general principles relating to the establishment of the costs and margins resultant from the various investigations. Approached in this way however the Report offers many reasons for which distributive margins may be excessive.

It is an elementary economic principle that in a perfectly competitive equilibrium prices would equal costs. It is easy to see that the conditions of a perfectly competitive market are far from obtaining in the distributive process as indeed in all other parts of the economic system. The market is indeed imperfect from the consumer's side as from the producer's side. It is a notable fact, and one brought out particularly clearly in the study on the bread market in Germany, that prices of foodstuffs of the same type and quality vary considerably not only as between different towns but even within the same locality of a given town. Very often the consumer does not know of these differences; in other words, he does not, before making his purchase, explore the market in the way the retailer does on the wholesale market. Very often he prefers to deal at one shop rather than another. From the consumer's side therefore the levelling influence of the market tends in many cases to be absent. It is difficult to esti-

mate the effect of this on consumer's prices but attention may be drawn to the conclusion in the study of German conditions that an action designed to eliminate such price differences would reduce the average level of prices by at least 10 per cent. In that study it was argued that local price differences reflected less differences in costs than differences in the retailer's earnings. And in the light of what has been said above on the nature of costs it is evident that differences in costs on a properly competitive market do not justify differences in prices. The remedy however lies chiefly in the hands of the consumer.

The imperfections of the market within the distributive process itself are often of equal importance or even greater importance than the imperfections on the consumer's side. Perhaps one of the most notable features of the collection of studies presented in the Report is the frequency of references to the possession of monopolistic or quasi-monopolistic powers on the part of distributors or their organisations. Owing to the diversity of periods to which the studies refer we cannot indeed determine how far these powers prevail to-day. In all probability, however, they are stronger to-day than in the earlier periods with which many of the reports deal. The most extreme examples are perhaps offered by the report of the Canadian Royal Commission on price spreads, from which it appears that in several food industries there are large corporations which are able more or less completely to dominate the market, to the consequent disadvantage both of the primary producer and of the consumer. In almost all countries, moreover, the majority of traders form associations for their common benefit. Not all of these exert or are able to exert monopolistic influence. On the other hand, many of them do prescribe and regulate the prices at which members may sell their goods, and employ effective sanctions for their enforcement. The prices under such agreements are designed to enable the traders to cover their costs and gain a "reasonable" profit. Another aim is often to prevent fluctuations in raw material prices bringing about similar fluctuations in the price of the final product; in order to prevent irregular and disturbed trade. It is perhaps significant in this regard that in a number of German towns in which the policy of a steady bread price was pursued the average level of prices tended to be higher than in towns in which this policy was not pursued.

These almost "natural" imperfections of the market, so old and so general as to be taken almost for granted, are today supplemented in nearly every country by the effects of State economic policy. Often the regulation of agricultural prices has necessitated the regulation of both retail food prices and the distributive margins. In other cases—as for example in the United Kingdom—the distributive margin has tended to increase. The report of the Food Council in that country in 1936 stated that: "Consumers have legitimate cause for complaint in so far as the Marketing Schemes, which were intended to give primary producers the power to organise and co-ordinate the sale of their produce, confer in addition powers of intervention in the subsequent stages of treatment and distribution which are not the province of producers and of which they cannot be expected to have expert knowledge. The consequent tendency of producers is to seek the co-operation of the intermediaries, who do know the trade, by securing to them minimum margins, which are frequently exceeded and which are

not based upon ascertained costs for the specific services to be rendered". In the study of distributive spreads in Austria it is stated that "In the case of those commodities which are subject to State regulation, as are dairy products... the margin between wholesale prices and producer's price may be wide." (1). It does seem true that with the growth of State regulation in economic affairs the distributive process has ceased to be affected only, or even mainly, by the power of the competitive market.

The growth of the large scale distributive organisation in post-war years is, no doubt, in large part due to the fact that it is able to secure economies of various kinds which are not open to the smaller unit, and consequently sell at lower prices. The Canadian report also affords instances too of this principle. On the other hand, if the growth is such as to give the large organisation a dominant influence on the market, reducing the influence of competition, then several factors may arise which tend to raise total costs (and, subsequently, prices) and which do not at the same time facilitate the restoration of competition. In several instances the phenomena of "overcapitalisation" and "overcapacity" are cited as being responsible for unnecessarily high prices. It should not require a special knowledge of economic theory to see that such phenomena can only occur in the absence of effective competition. Where competition is perfect the capitalisation and overhead costs cannot determine the price of the produce. The price will be determined on the market by supply and demand. Out of a state of equilibrium the price resulting may be either higher or lower than that necessary to cover the capital charges—interest, amortisation, etc.—of a given enterprise. A firm possessing predominance on the market is however able, and does, fix the price at such a level as to enable it to meet as great a proportion as possible of the capital charges. In such a case where demand is declining, as for some foods consequent upon changes in consumers' preferences and notions of diet, the decline is accompanied, not, as under competition by a fall in price, but by a fall in output, whilst price may remain stable or fall only slightly. Under competition "overcapitalisation" and "overcapacity" are disadvantageous only to the producer; under monopoly they often operate to the disadvantage of the consumer.

Where competition is limited, certain business practices are sometimes adopted which are not in general to the advantage of the consumer. Though the use of trade marks and patents is naturally more common in respect to industrial products than in respect to agricultural products, even in the latter case it facilitates the practice of re-sale price maintenance. Where goods are, for example, canned or prepared in a special way and given a trade name by a single large concern, that concern may sell them to retailers for re-sale at prices fixed by the concern—penalties being applied to retailers who go below such prices. Thus even though retail trade be not monopolised, the

(1) *Vide*: "The spread between producers' and consumers' prices of certain Foodstuffs in Austria". *Monthly Bulletin of Agricultural Economics and Sociology*. Rome, June 1937.

large scale wholesaler is able to exert a monopolistic influence on the retail price. In such cases too, the trade name is often the only special feature which distinguishes the commodities from others which otherwise would be its rivals.

Another related factor which increases the total expenditure on distribution is the indulgence in costly advertising campaigns—one of the reasons why the proportion of selling costs to total distribution costs has so often risen. Though it may be conceded that costly advertising campaigns of the “eat more fish” variety may bring not only a gain to the fish producers and distributors but also to the consumer, who is thus made aware of the deficiencies of his diet, it is more doubtful whether costly campaigns recommending the consumer to eat Brown's fish rather than Jones's fish and *vice versa* works to the ultimate benefit either of Brown and Jones or to the consumer. Where several large firms engaged in the trade in the same product year after year expend large sums in advertising their respective products it is arguable that the total market does not expand in proportion to the expenditure on advertising, the costs of which are ultimately born by the consumer. Such tendencies are perhaps most evident in North America, but are by no means entirely absent from European countries.

Advertising of the second type noted above is a feature not of simple monopoly so much as of the intensified competition between a small number of large enterprises. In the Report criticism is often levied however by high authorities not only against this but against the intensified competition of a large number of small enterprises. Such criticisms are directed particularly against some types of organisations of retail distribution. The main defect of such organisations is that there is an extraordinary amount of overlapping. Particular streets may be served by several retailers situated at varying distances with the consequence that expenses of carriage, of labour etc. are duplicated quite unnecessarily. This may be justified in those cases where each retailer sells a special type or quality of good, but it can hardly be so where the commodity is of a staple type—for example milk supplied by the same co-operative or wholesale distributor. An agreement among retailers to divide a given area amongst themselves—not, of course, supplemented by an agreement to maintain prices—could not fail in many cases substantially to reduce costs. “It is obvious”, states the Report of the Milk Reorganisation Commission for Great Britain “that the costs of delivery must be greater when a large number of roundsmen are serving the same street; and the costs of equipment, premises and labour and of balancing supplies must all be higher with, say, ten 15 gallon rounds than with one 150 gallon round. We have been furnished..... with particulars for a number of towns from which it appears that large numbers of retailers must have rounds of considerably less than 20 gallons and some of them rounds of 10 gallons or less.....”. It is hardly necessary to add that similar defects are also to be found in other stages of the distribution process.

Not very much information is offered in Report concerning factors such as indirect taxes which are, from the point of view of distribution alone, an unnecessary burden. In almost all countries today many foodstuffs are augmented

in price in the distributive process through the imposition of sales taxes, excise duties and the like. Some taxes indeed, such as dealer's licences, do not affect prices, in that they are fixed charges paid out of income. Sales taxes on the other hand are automatically added to the price of the commodity. In Austria the sugar turnover tax represents 6.56 per cent. of the retail price. In Germany in 1930-31 the consumption tax revenue represented 2.2 per cent. of the total expenditure on foodstuffs and import duties 1.8 per cent. Such taxes are imposed for reasons of financial or agricultural policy. Whether such reasons are sufficient or not is clearly outside the scope of the present study, in which, however, the existence of such taxes must be noted.

Likewise the data contained in the report on transport rates and costs is not sufficient to enable one to judge the degree to which these are excessive. In general terms however it may be said that their excessiveness or otherwise depends primarily on the adaptability of the organisation of road and rail services to the individual needs of the particular trade, which evidently vary, for example, as between cattle, fruit or fish. The principle widely adopted by railways of charging "what the traffic will bear" is an illustration of the way in which rates may be excessive on high value goods which cost no more to transport than low value goods. On the other hand transport rates which are rigid and do not respond to seasonal fluctuations may often diminish the efficiency of marketing. The inadequate use of carriage space also increases the unit expenditure on transport.

In the light of the foregoing it may be concluded that through it is not possible to make any statement as to the proportion of distribution costs which are regarded as excessive it is possible on the other hand to assert that there are several reasons to suppose that such costs are not as low as they might be. Bearing in mind that under competitive conditions a lowering of distribution costs will in the long run result in lower consumer's prices, we may, in the next section, briefly survey some of the methods to bring a reduction in costs about.

IV. — Methods of reducing distribution costs.

The analysis in the foregoing section of some factors which tend to make distribution costs excessive almost automatically suggests some of the directions in which action may be taken to lower them. In most countries at different times certain efforts have been made to this end by consumers' organisations, by central and local governmental authorities, by the distributors and the producers—in fact, all the parties concerned—either separately or by co-operation amongst themselves. Some methods do not involve any changes in the organisation of distribution, but consist in removing the imperfections of the market—from both the consumers' and the producers' side which were indicated above as partly responsible for excessive costs. Others relate to the improvement of individual services such as transport and marketing accommodation; and still others involve important changes in the organisation of distri-

bution. Their importance and success naturally vary considerably between countries according to the general state of industrial and agricultural development.

Among the efforts made to reduce retail price, not involving changes in the organisation of distribution, may be noted the "fair price" campaigns—one example of which is described in the section in the Report relating to Germany. Investigations into various markets had led to the discovery that local variations ascertained in retail prices of similar quality goods were not attributable to differences in the objective conditions—in costs of labour, or transport or rents. One of the main reasons, instead, was the consumer's lack of knowledge of the market—due either to his preference for a particular retailer or to his desire to shop at the nearest dealer. In consequence it was thought that if a responsible body were to examine the conditions of the market and determine "fair" or "objective" prices and then publish and publicise these by means of the daily press and the wireless, the consumer would be in a better position to judge whether he was paying reasonable prices or not, whilst the retailer who was banking upon his customer's ignorance of the market to charge excessive prices would find a change in policy appropriate. Such a campaign was begun in Germany at the end of 1929 and very shortly had notable effects in reducing the average level of retail food prices and, *ipso facto*, the wholesale-retail margin. It may be suggested therefore that the first imperfection of the market noted in the preceding section need not be regarded as irremovable. However, it is well to point out that in general the retailers who charge excessive prices owing to the customers' lack of knowledge are not those who sell in the poorest quarters of a town; a lowering of prices by this method would not necessarily appreciably benefit the undernourished sections of the population.

The problem raised by the second type of imperfection—that of controlling monopoly or monopolistic tendencies in the food trades—is obviously not one that can be treated fully here. We may note however that though in most countries the main forms of monopoly are today tolerated by law, attempts are constantly made—with varying success—to prevent their exploiting their advantages to the full. The chief method—apart from rendering certain practices illegal—to which we may here refer is the setting up of public or semi-public bodies to maintain a watch over the price policies of distributors or distributors' organisations for the consuming public's benefit. In most cases such bodies do not have executive powers but merely the power of reporting to and advising the relevant Ministry as to action which is desirable from the consumers' standpoint. In the United Kingdom *e. g.* the Food Council was set up in 1925 "To investigate and from time to time to report to the President of the Board of Trade on such questions as by reasons of complaints from persons interested or otherwise appear to the Council to require investigation in the interests of consumers or traders, or are referred to them by the President of the Board of Trade, relating to the supply or price of articles of food of general consumption..." Up to March 1937 it had made 25 reports, referring to bread, tea, milk, market garden produce and meat. At various times when distributors associations have desired to raise their prices the Council has itself investigated the justification of the change

proposed. It is of interest to note also that the Agricultural Marketing Acts which have marked a new epoch in British agricultural policy also provided for the setting up of Consumers' Committees with similar functions. It is however evident that the success of all such bodies depends both on the powers which are given to them and on the consideration they receive at the hands of the final State authorities.

We have seen that the criticism is often made that the increased services rendered to the consumer by the retailer have tended to increase distribution costs considerably since the war; it may be asked therefore whether and in what directions it is possible to eliminate superfluous services. There are indeed many difficulties in this connection, not the least being the necessity for co-operation among retailers. Granted this co-operation however—which should not be impossible of attainment—the retailer might at least restrict two services, namely the delivery of the goods at the consumers' domicile and the granting of credit. Both of these services to-day are rendered in general indiscriminately to all customers who wish to take advantage of them. In general however not all the customers avail themselves of them; nevertheless since the general practice is to charge the same prices to credit customers and customers who have their purchases sent home, the cash customers and those who carry the goods home themselves are obliged to contribute to the costs of the services rendered to others. It is clear therefore that at least one important step in reducing such services would be to charge for them. There are indeed psychological difficulties in putting such a system into practice. Whether they can not be overcome by appropriate public educational campaigns need not be discussed here.

If the consumer is to be encouraged to make an effort to be economical, so too the distributor. In some countries much progress has been made by the individual entrepreneur in reducing costs by the elimination of waste, the better use of labour, transport and space; in others, much ground has to be covered. The smaller retailer, who often takes to his trade because it does not require special training or qualifications often appears to lack knowledge of the best methods of organising his affairs. The Linlithgow Committee indeed reported, in regard to the fruit and vegetable trade in the United Kingdom, that "a large number of retailers lack business training and efficiency in the conduct of their business" and calculated that by improved methods they could reduce prices by "over one twelfth". It does seem that even to-day there is scope for the undertaking of detailed studies of the organisation of small enterprises with a view to the propagation of improved methods.

More radical methods than such as the above have frequently been proposed and put into practice. On the one hand producers have organised co-operatives to carry out the whole process of collection and placing on the wholesale market. On the other hand retailers attempt to avoid the private wholesale dealers by organising a wholesale co-operative. And again, consumers have joined retail co-operative societies whose aim is to eliminate retail profits from the consumer's price. The co-operative efforts have had an undeniable success in many trades. Sometimes these attempts to "eliminate the middleman" arise spontaneously, quite often however they result from public encouragement in the form either

of propaganda and instruction or of more concrete assistance. The co-operative form of organisation evidently possesses certain advantages through the centralisation of marketing and the elimination thereby of many costs which would be incurred if each producer acted independently, marketing his own small quantities separately. Though co-operation has made considerable progress since the war, the question of how far the principle of co-operation can be extended today obviously deserves the careful attention of those who are interested in the reduction of distribution costs.

In the Report, in the study of distributive margins on bread in Germany it is suggested that economies could be made if bakers of a given district organised co-operative factories which would manufacture all the standard types of bread whilst the baker would concentrate his production on the more fancy goods. According to the study from which the suggestion is taken, such methods had already been adopted in Denmark, with considerable success. This example as well as the post-war trends in the organisation of the distribution of milk suggest that where an important part of the distribution process consists in the transformation of the raw foodstuff, that transformation may most economically be performed centrally, and on a large scale.

It will be seen that there are possibilities of appreciable reductions in costs provided that traders learn to co-operate. One of the main reasons for excessive costs noted in the preceding section was the overlapping of retailers' services. Here again the remedy lies in co-operation among retailers—in co-ordinating their activities and dividing up their market. In most cases the large number of retailers in a given area would prevent the assignment of a given number of streets for order business to a single retailer—co-operation to that degree is hardly practicable. But the assignment of several streets to a group of several retailers would probably suffice to reduce overlapping and duplication whilst impeding monopolistic behaviour on the part of those retailers.

Less success has attended the efforts of individual farmers to carry out their own marketing themselves. Though the farmers thus avoid the middleman the fact that they have to divide their time and resources often tends to diminish their efficiency both on the farm and in marketing. Nevertheless, where a large farmer creates a separate dependent marketing organisation this defect may be overcome. It is however unlikely—except in the case in which distribution costs are a small proportion of the value of the commodity—that a farmer distributing directly his own wares is able to make the economies that concerns can make which are engaged in the distribution alone of the goods of many farmers.

Such methods as the above by no means exhaust the list of possibilities of reducing the costs of distribution. No mention has been made, for example, of the possibilities of direct State action to remove certain indirect taxes and duties, to revise and reorganise transport rates, nor of all the many mechanical appliances which in various countries have been used to economise labour or shop space. That there are possibilities in these directions is almost self-evident. The aim of this section has been indeed, not to present an exhaustive list, but to show by a few examples that there are sufficient possibilities of reduction of distri-

bution costs to justify the belief which underlay the proposal of the League Committee on Nutrition to the Institute to collect material on the distributive margin—the belief, namely, that research in this field combined with appropriate action could contribute to lowering prices of necessary goods to the consumer and consequently to the improvement of nutrition standards. The Report is only a tentative first effort in this direction; if it succeeds in stimulating further enquiry it will have achieved its purpose.

A. EMANUEL.

THE NEW WHEAT POLICY IN FRANCE

SUMMARY: Period from 1929 to 1935 – Period from 1935 to August 1936 – The Law of 15 August 1936 creating the National Wheat Office. — *I. Market Organisation:* (1) Protection of the national market, (2) Organisation of the national market. — *II. Measures concerning Production:* (1) Existing laws confirmed. (2) New measures. — Conclusion.

The most important arable crop in France is wheat. Wheaten bread became years ago, and still remains, the basic food of the French population. The French are large consumers of bread and a large proportion of the French population gains its livelihood from the cultivation of wheat. Under these circumstances successive French governments have not been able to do other than to intervene according to the conditions, sometimes in the interest of consumers, sometimes in the interest of wheat producers. In the past there was a fear of famine which was not without justification. In the years immediately following the Great War public opinion and public authorities were concerned to check high costs of living. However, in spite of a reduction in the area sown to wheat domestic production quickly increased, as a result of an increase in yield due to technical progress, to the pre-war level; while in the French colonies in Africa, whose territory was in ancient times the "granary of Rome", wheat production developed rapidly. On the other hand wheat consumption per head tended to decline and the size of the French population had become stationary. In these circumstances the danger of overproduction of wheat became real, and it presented a serious problem in 1929 when an abundant harvest coincided with a collapse of world prices, particularly agricultural prices.

The fall in the world prices made the competition of the imported cereals ruinous for French producers and practically prevented them from exporting wheat.

From that time successive governments have taken various measures to help the wheat producer. The latest is the setting up, under the Law of 15 August 1936, of the Wheat Office. This measure was taken at the moment when several conditions were about to be completely changed. Stocks had already been in large measure absorbed. From that time wheat prices on the major world markets recovered. It was followed by a poor harvest and a little

later by the devaluation of the French franc and a general rise in prices in France. So, in these conditions, it was frequently said that this measure to stabilise the price of wheat, taken in the interests of the farmers, in fact worked against them.

The period between the crisis year 1929 and the date of the establishment of the Wheat Office can be divided into two distinct phases.

Between 1929 and the end of 1934 the unsatisfactory measures taken by the government, which have already been dealt with in this *Bulletin* (1), led to the accumulation of an enormous stock of wheat. From December 1934, when a new wheat law, also studied in the article mentioned above, was passed the stocks tended to be absorbed partly as the effect of a policy which from the beginning of 1934 sought to control not only the market but also production, partly as the result of weather conditions.

Period from 1929 to 1935.

At the end of 1929 the import of wheat was indirectly limited through the limitation of the proportion of foreign wheat used in flour milling. At the beginning of 1930 recourse was had to the traditional but very inadequate measure, the increase of the import duty on wheat; the duty was raised to 80 francs, that is to say made equal to the price of wheat on the major world markets. In 1932 customs duties on secondary cereals were raised. Almost at the same time the import of barley and bran was also limited, and at the beginning of 1933 maize imports were similarly regulated. But these measures came too late. The prices of secondary cereals had collapsed. The cheapness of other fodder supplies reduced the demand for wheat offals; and these low prices made it the interest of the millers to extract from wheat the highest possible proportion of bread flour. On the other hand, the high price of wheat relative to that of other cereals encouraged farmers to take particular care in the growing of wheat, and there was perhaps here and there an increase of the area sown to wheat. Large stocks were accumulated the final disposal of which was doubtful. In the middle of June the price of wheat fell to 80 francs per quintal.

The Law of 10 July introduced the principle of a minimum legal price. Further, it prohibited for two months the importation of soft wheat, provided for the creation of wheat stocks and for the reduction of the coefficient of extraction in the milling of bread flour, and established bounties on denaturation and on exports. In August 1933 the above mentioned policy of import quotas was applied to oats, rye, buckwheat, durra, millet, and canary-grass. There remained still some gaps to be filled up. Thus, the import of rice which could be substituted for denatured wheat and wheat offals in animal feeding, has never in fact been limited. The competition of denatured wheat reduced the prices of secondary

(1) Dr. H. BÖKER: "The Wheat Policy of France". *Monthly Bulletin of Agricultural Economics and Sociology*, March 1935.

cereals, which continued to decline. Above all these measures like the previous ones had the major defect of affecting only the market and not production itself. The original plan of the Gouvernement had indeed provided for the limitations of sowings, but this provision was not passed. In the final text there was only a provision for the obligatory declaration of the areas sown to wheat. Wheat remained the most attractive crop, since the growing of other cereals was highly unprofitable while wheat-growing left, at least for certain farms and in certain districts, a margin of profit for the farmer (1). At the legal price supply greatly exceeded demand. So that in fact the minimum price was not respected (2).

It was only in the Law of 28 December 1933 that there was a provision for a fine to be imposed on those farmers who do not follow the rules for crop rotation and who sow wheat on land which produced a wheat crop in the previous year. At the end of 1934 the price on the "black" market was between 75 and 85 francs (3).

The Law of 24 December 1934 abolished the minimum price except for wheat from stocks. This abolition was accompanied by two series of measures, the one aiming at the removal of the surpluses by means of denaturation and export, the other prohibiting the increase in sowings.

Period from 1935 to August 1936 (4).

At first the farm price of wheat fell to 70—65 francs per quintal, according to the *Bulletin* of the Wheat Producers' Association. Later it changed little until July, while the wholesale price at Paris remained almost stable at about 79 francs per quintal. In July the price at Paris fell to 69 francs; but the farm price of wheat fell very much more and according to the Wheat Producers' Association wheat on the farm was sold on 1 August for only 50 francs. The spread between the price on the farm and the wholesale price had thus increased very much. Certain farmers, pressed for money, were compelled to sell at disastrous prices immediately after the harvest. An attempt was made to finance the harvest.

(1) According to the Central Office for Accountancy and Rural Economics, on the large farms of the Soisson district wheat and sugar-beet were the only crops which yielded a profit in the season 1930-31. M. Ferté, president of the Office for Agricultural Accountancy in the Soissons district, calculated that from 1927 to 1931 the cost price per quintal for wheat amounted to 161.38 francs, the average sale price per quintal of wheat in Paris in the seasons 1930-31 and 1931-32 was 172 and 161 francs respectively. But the cost price varies from region to region and even from farm to farm.

(2) THE WORLD AGRICULTURAL SITUATION IN 1933-34, International Institute of Agriculture Rome, 1935, pp. 182-3. THE WORLD AGRICULTURAL SITUATION IN 1934-35, International Institute of Agriculture Rome, 1936, p. 237.

(3) PIERRE FROMONT: "La production agricole" in the year book for 1935 published by *La Revue d'Economie politique* in May-June 1936.

(4) For this period we have used this study by Professor FROMONT in the year-book for 1935 published by *La Revue d'Economie politique* in May-June 1936 and "Le nouveau statut du blé en France" by M. ROLAND MASPETIOL in *Revue économique internationale*, February 1936.

The Bank of France agreed to give its assistance to agricultural credit banks in order to allow them to make loans to farmers which should allow the latter to space out their sales. The Decree-Law of 30 October 1935 abolished the tax on production; in doing so it merely recognised the financial failure of the tax.

The same decree-law sought to solve the problem of absorbing possible surpluses from the wheat harvest. It maintained in force the measures provided in the Law of December 1934; but it facilitated the putting into operation of these measures by providing for the collaboration of a committee composed of producers' representatives on the one hand and an equal number of representatives of corn merchants and millers on the other hand. Moreover this particular problem had become less urgent: stocks had already fallen and the 1935 harvest was not good. From the end of August prices of wheat rose. The farm price reached a maximum of 78 francs per quintal in September, and in December was 70 francs that is to say about the same level as in the previous January. Wholesale prices in Paris also reached in September a maximum of 84 francs per quintal, and in December were 78 francs, a level only one franc below that of the previous January. The price of wheat continued to rise during the first half of 1936. The farm price according to the *Bulletin* of the Wheat Producers' Association, was 80 to 82 francs in January, 88 to 92 francs in February, 100 to 102 francs in March, 93 to 97 francs in April, and 96 to 87 francs in May, which is twenty per cent. above the price for May 1935.

But the increase in the spread between the farm price and the wholesale price which occurred in August 1935 caused great discontent among the farmers. Some of the farmers appealed to the State to intervene more energetically (1). Others hoped for a solution on corporative lines and expected much from an organisation of agriculturists (2). The agrarian party demanded the creation of an Assembly which should discuss and decide upon economic questions and participate with the Parliament in the making of laws. However, the General Association of Wheat Producers demanded a trade organisation such that the producers themselves could arrange, should it be necessary, for the elimination of possible surpluses. The procedure established by the Decree-Law of October 1935 seemed to mark a first step in this direction.

The Wheat Office figured in the programme of the "front populaire." It cannot be said, however, that this represents economic planning in the strict sense. Actually it was not a question of a general plan for agriculture; the Wheat Office represented a very partial State control which was concerned only with wheat, the price of which is by tradition considered as the symbol of the economic position of French farmers. The election of May 1936 gave a majority

(1) Professor HORNOSTEL was favourable to these claims and advocated the establishment by the Government of a fixed price for wheat. See his pamphlet published at the end of 1935 "Peut-on stabiliser le prix du blé? Une solution corporative en harmonie avec l'intérêt général".

(2) JEAN SIROL: "Le caractère actuel de la crise agricole et en particulier de la crise du blé en France". *Revue d'économie politique*, January-February 1936.

to the "front populaire". The new government took office in June. Almost immediately afterwards was passed the Law of 15 August 1936 which created the National Wheat Office.¹

The Law of 15 August 1936 creating the National Wheat Office.

The main duty of this Office is to fix a price for wheat and to keep stable the price for any particular harvest. It supervises the wheat market, and regulates the trade in and production of wheat.

I. — Market Organisation.

(1) Protection of the National Market.

It is possible to maintain within a country a price superior to that on the world market and to regulate the national market, only if this market is isolated. This has in fact been for many years the position of the French wheat market. It must be pointed out, however, that French policy continually vacillates between the idea of a national market and the idea of an imperial market, and neither of these conceptions has been exclusively adopted. The Law of 1936 did not affect this isolation of the French market. The monopoly of foreign trade which it gave to the Wheat Office is nothing more than the logical conclusion of the quota policy. The instrument for this policy is most generally that of import licences, often issued by the intervocational committees which function under the control of the Government. The Decree of 10 November 1931 created an intervocational committee for wheat. This was given the duty to issue import licences during the period when the import of foreign wheat was allowed within certain limits. It also issued after 1932 import permits for wheats imported under the system of temporary admission (1); this system represented a gap in the protective policy which was all the more serious as it prevented production in the French colonies in Africa from being attracted to hard wheat and strong wheat which are not produced in the home country. The quotas for Moroccan wheat and alimentary pastes were in accordance with an agreement made in 1932 for a period of five years by the producers' associations in France, Algeria, and Morocco.

The Law of 1936 gave to the Wheat Office scarcely any really new functions; its main effect was to transfer to the Wheat Office functions which until then had been divided between the Government and the intervocational Committee which was dissolved shortly after the setting up of the Wheat Office. This new office is administered partly by a Central Council created by the

(1) THE WORLD AGRICULTURAL SITUATION IN 1932-33, International Institute of Agriculture, Rome, 1934, p. 178.

Law of 15 August 1936 and composed of 51 members, 29 of these being wheat producers, while most of the other members apart from 4 high officials represent millers, bakers, etc., and consumers; and partly by a director nominated by the Government and having under his control a staff taken from the Ministry of Agriculture. The Central Council decides what amount of wheat can be imported, and in the case of overabundant harvests, what amount should be exported. These decisions along with the fixing of the price of wheat, that is to say in practice all the important decisions, need a quorum of four fifths of the members and a three quarters majority. When the required quorum and majority are not obtained the decision is taken by the Government.

The Central Council of the Office decided that for the time being there was no reason to allow the import of foreign soft wheat (1). The bureau of the Office gives import permits for hard wheat, rye, and alimentary pastes made from wheat. The import of rye is, however, at the moment forbidden in France except in the case of rye for seed which is allowed up to a limit of a quarterly quota of 10,000 quintals (2). It also issues permits for the export and import of wheat, flour, and semolinas, and food pastes, under the new system of temporary import which is nothing else than the old customs system of temporary admission, suppressed and at the same time reestablished under a new name by the Law of 15 August 1936 (3). Finally, the Central Council of the Wheat Office gives advice to the Minister of Agriculture on the determination of the quotas for wheat and Moroccan semolina admitted free of duty into France and Algeria.

It is clear that the Office does not handle foreign trade. It does not directly conduct any import or export transaction; it confines itself to authorising and supervising these transactions.

(2) *Organisation of the National Market.*

The Central Council of the Office fixes the price of wheat after having examined the suggestions of the departmental committees which are for the departments somewhat the same as the Central Council is for the national area. It takes this decision under the same conditions of a quorum of four fifths and a majority of three quarters which we have already described in connection with the determination of the import and export quotas. If these require-

(1) GOVERNMENT MEASURES AFFECTING AGRICULTURAL PRICES, No. 9, 3rd year, 1937, France, page 23, International Institute of Agriculture, Rome.

(2) GOVERNMENT MEASURES AFFECTING AGRICULTURAL PRICES, No. 7, 2nd year, 1936, France, p. 115, Quota for the fourth quarter of 1936. International Institute of Agriculture, Rome.

(3) See article 16 of the Law, and the parliamentary debates on this subject (especially *Journal officiel* of 2 August 1936). See also GOVERNMENT MEASURES AFFECTING AGRICULTURAL PRICES, No. 7, 2nd year, 1936, France, p. 119, International Institute of Agriculture, Rome.

ments are not obtained the decision lies with the Government. This solution is the result of a compromise between the Government and the two Chambers. At first, the Government, supported by the Chamber of Deputies, required unanimity for decisions of the Office on price questions; the Senate, on the other hand, wanted such decisions to be taken on a simple majority. The price thus fixed applies to wheat of sound quality, free from impurities, and merchantable, and weighing at least 72 kg. per hectolitre. Deductions and allowances are made for wheat of poor and extra good quality respectively.

The Central Council unanimously fixed the price in September at 140 francs per quintal with a monthly premium of 1 franc up to and including January, and of 1.50 francs from then until the new harvest. This premium does not appear too high if it is born in mind that at the present time in France the rate of interest is relatively high. According to the General Wheat Producers' Association this unanimous decision is the result of a compromise. The production tax that has been reestablished reduces on the other hand the net profit of the grower. It is, however, true that it only applies to producers of more than 100 quintals, and, moreover, deduction is made for wheat exchanged for flour or bread. This price is uniform for the whole of France. If the text of the law does not expressly forbid changes in the wheat price during the year, it is clear, as the Minister for Agriculture, M. Monnet, pointed out in a recent speech, that this was the intention of the authors of the law. It is a rigid system. In order that it may be just it is essential that there shall be monetary stability. Now it is well known that this condition was not realised, since the French franc not only fell, as a result of depreciation, in value relatively to foreign currencies and gradually approached the lower limit of the anticipated parity, but also rapidly depreciated in terms of domestic goods after these events. It is generally agreed, however, that the official wheat price rules and that the new legislation has over the minimum price law of 1933 at least the advantage that "black" markets are much less common. The original plan of the Government provided that all the seasons' output should be bought by the co-operative societies for the purchase, stocking, and sale of wheat, but although during recent years the co-operative movement has become very widespread among wheat producers in France it was recognised that its size was not yet sufficiently great for these societies by themselves to undertake this function. Recourse had to be had to the services of grain merchants. The assistance of commerce remains at the moment indispensable if only by reason of the lack of store-houses. The millers could no longer buy directly from the producers who had to sell their wheat either the co-operative societies, or to the grain merchants from whom certain guaranties were however required. The fulfilling of these obligations is controlled by means of receipts which should accompany the wheat from the store to the mill. Where there is a direct delivery from the producers' granary to the mill this delivery has to be authorised by the co-operative society whose authorisation takes the place of the transport permit. While taking these measures and providing for the stocking and export of surpluses the law took precautions against further overproduction.

II. — Measures concerning Production.

Some of these measures simply confirm existing laws; others, in general more indirect, are new.

(1) *Existing laws confirmed.*

Increase of the area sown with wheat is still prohibited. This measure is however difficult to apply. In order to make it effective it would be necessary to know exactly the area sown to wheat, and there is in France no exact information about this. Obligation to declare the area sown to wheat was imposed by the Law of 10 July 1933 and a similar obligation in respect of the amount of the harvest was made by the Law of 24 December 1934. The Law of 15 August 1936 required the publication of these declarations. The trouble is that in France farmers rarely know exactly what is the area they cultivate. Further, in the case of tenant farmers there is always a tendency to minimise the size of the harvests declared in order not to give the owners a reason for increasing the rent.

M. Marcel Donon, at that time rapporteur of the Committee for Agriculture, declared at the sitting of the Senate 29 June 1934: "the farmers have hardly accepted the idea of the obligatory declaration". The obligatory declarations of the areas sown to wheat, required by the law, gave a figure of 3,820,000 hectares while the official statistics of the Ministry of Agriculture gave 5,342,000 hectares. It is certain that the areas declared in the town halls did not correspond with the actual areas. The statistics of the Ministry of Agriculture, moreover, have not a very great value on this particular point.

It is difficult to check the declarations of the farmers. In France the land register is already very old and out of date.

It is in process of being brought up to date but at the present time the work is not nearly finished and it is probable that for a long time it will be much more difficult to obtain exact knowledge of sown areas in France than it is to obtain similar knowledge in new countries and with recent land registers.

(2) *New measures.*

The system of transport permits instituted by the Law of 15 August 1936 allows the checking if not of the declaration of areas sown, at least of the size of crops.

In the 1937 season if there are surpluses the amounts that the Wheat Office decides to stock and to export will be provided by farmers selling more than 50 quintals, pro rata to the average of their last three crops and the price can not be more than 20 per cent. less than the price fixed for the national output.

From the 1938 season there will be established a wheat production quota for each producer selling more than 50 quintals. Those among them who produce more than this quota will have to sell the surplus to the Wheat Office through the co-operative society to which they make deliveries, for stocking and export.

The Office will pay for the surpluses at a price reduced by an amount determined by the Central Council. It is hoped that this difference between the price for surpluses and that for quotas fixed in accordance with normal sowings will make the wheat producers keep to these quotas. Above all it is hoped, since the increase in the area sown was probably not the most important cause of overproduction, by this means to make the farmers refrain from sowing the most productive types of wheat (1).

The hope is that varieties with a lower but more uniform yield will be more generally grown. As varieties with a large yield are sought above all by the large farmers of the Isle de France it is hoped that the law fixing a given production for producers of more than 50 quintals will be sufficiently effective. The future will tell whether or not it is so. To achieve this aim would be a large step towards the solution of the problem of the French wheat market.

Conclusion.

But it is always necessary not to be too optimistic and not to forget that however commendable the measures taken the output and therefore the price of wheat will always depend to a large measure on weather factors and natural variations. For this reason even if it is possible to organise the market better than it was organised in the past, even in respect of wheat production, the desired stabilisation of the price of wheat in particular and of agricultural products in general will always be more difficult than the stabilisation of the prices of industrial products. Finally, it must never be forgotten that the stabilisation of prices is subordinate to monetary stabilisation, and that without monetary stability the stabilisation of a given price is unsound.

M. ARCHIÉ.

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THE TREND OF MARGARINE PRODUCTION IN THE MOST IMPORTANT MARGARINE PRODUCING COUNTRIES

CONTENTS: *General trends. — Margarine production in the last few years: Raw materials used; Importance of whale-oils in margarine production. — The trend of margarine production in the most important producing countries: United States; Germany; Great Britain; Denmark; Netherlands; Czechoslovakia; Sweden; Norway; U. S. S. R.; Belgium; Finland and Japan.*

General Trends.

In the December 1934 number of this journal there appeared an article on the trend of the production and use of margarine in the most important margarine-using countries of the world. The purpose of the present article is to review further developments, these being of the greatest interest from the point of view of the fat supply and also of particular importance for the general agricultural economy. The margarine industry is an important consumer of agricultural products, and the by-products from the preparing of its raw materials are an important contribution to the supply of fodder; and this supply of fodder is an important factor in the increase of milk and thus of butter production, with which margarine is at times in strong competition. The relations between agriculture and the margarine industry are thus most complex.

In the first article we showed that the margarine industry increased rapidly after the end of the nineteenth century, when the industry had been in existence but a short time, as a result of the continuous increase in the demand for fat in industrial countries in North and Central Europe, a demand which could not be completely met either by home production or by the import of animal fats from overseas. Margarine was well adapted to consumption habits in these countries and soon became an indispensable food.

We saw also that the margarine industry further increased in the post-war period, and that this was the result on the one hand of the severe shortage of fats after the war and the decreased power of large classes of people to buy animal fats whose prices had risen greatly, particularly butter; on the other hand it

was no less the result of the improvement in the quality of margarine and of the reduction in its price due to increased mechanisation of the production process and to the possibility of using cheaper raw material as a result of improvements in the methods of refining and hardening, and the result finally, in the later years, of an over-supply of raw materials. The competitive power of margarine was moreover increased by the amalgamation of the margarine industry which facilitated the carrying on of systematic propaganda. The progress in oil processing allowed the choice of raw materials to be made more and more on the basis of price trend, and so the proportion of the products of tropical lands and of whale-oil to the total raw materials increased continuously.

As long as there was a good market at good prices for butter in North and Central European countries and in the United States, in which margarine production was almost entirely concentrated, there was in but few countries a strong opposition to the margarine industry from the agricultural interests of the country, in spite of the increase in margarine production. Legislation in almost all countries was concerned only with checking illegitimate competition by margarine with butter, and with checking butter adulteration. Margarine filled up a gap in the fat supply in many countries. As the development of the production of animal fats was not proportional to the increasing needs severe measures did not come into consideration. About 1929-30 the position began to change. The increase in butter production, the intensification of the crisis and the resulting fall in purchasing power, the decline in butter exports, and the fall in butter prices, led to an increase in the competition between margarine and butter. The result of the fall in the price of butter was, on the one hand, that butter was again able to a greater degree to compete with margarine, and, on the other hand, that governments took numerous measures to protect the milk industry, measures which in a large part were inimical to the margarine industry.

The variety of the measures taken in the several countries show how different are the conditions of the fat supply in different countries. In some countries there was an increase in the tax on margarine and in the customs duty on margarine and raw materials for its manufacture, in others colouring was forbidden, production quotas established, with or without a quota for the import of oil raw materials, the use of margarine for certain purposes forbidden, and in some cases there was even a prohibition of the production and use of margarine. In certain countries with an excess production of butter a system of compulsory mixing of butter with margarine was established.

Agriculture was opposed to the margarine industry particularly on the ground that this industry used raw materials drawn in large measure from foreign countries while home-produced oils and fats could not find a satisfactory market. The objection of agriculturist in important margarine-producing countries was directed against the use of the products of tropical or sub-tropical lands with low standards of wages or with highly mechanised production, and against the excessive use of whale-oil. In many countries the regulation of the fat industry was regarded as a vital question for agriculture.

It was further shown in the previous article that under the influence of the conditions at that time many far reaching demands were made. We expressed

however, the view that in most of the countries concerned it was not possible to contemplate far reaching permanent measures, since, an excessive increase in the price of margarine and an excessive decrease in the amount produced would reduce to an intolerable degree the fats supply of large classes of people, but that on the other hand it had to be taken into account that it was impossible to expect that over a long time there could be in most of these countries an unlimited free competition between margarine and products of agriculture and that the output of the margarine industry would have to be so adjusted as not to destroy the marketability of animal fats. By studying the development of the last two years we shall now attempt to discover to what extent actual developments support the statements made in the previous article.

Margarine Production in the last few years.

The decrease in margarine production which had already begun to take place in several countries in 1930 continued in certain countries only until 1933. In 1934 there was in several countries a considerable increase in production which in 1935 became general for all the important margarine-producing countries. It soon became evident that a change had taken place in the conditions of the fats market which was the result of a poor output of the raw materials of the fat industry, a smaller production of animal fats due to a poor output of fodder, and a compulsory reduction of output on the one hand, and of an increased demand due to increased employment on the other hand. The significance of margarine in the fats supply in the large European industrial regions was again made evident.

In several countries the measures regulating the margarine production which were taken during the crisis years were gradually relaxed, but in only a few cases was unlimited production re-established. Among the large margarine-producing countries only Great Britain took no special measures limiting margarine production. The reason why production was decreasing even there after 1930 was the lower butter prices. When the price of butter rose in 1935 margarine production increased. In other countries it was still sought to adjust production to the market for home-produced animal fats. It is doubtful whether the measures in force at the present time in these countries are in many cases appropriate. More than in the previous years the question of margarine production is today in the several countries no longer an isolated question but part of the general problem of fats supply.

As regards the kinds and source of supply of raw materials used by the margarine industry, the tendencies existing for many years are still evident at the present time. However, in particular cases there have been important changes. The use as raw material of land-animal oils and fats temporarily increased in countries where it was compulsory to mix butter with margarine, especially in Holland. But in general there was further decrease in the use of animal oils and fats.

The percentage of these fats in the total quantity of oils and fats used as raw materials in the margarine industry in the United States fell from 72 per

cent. in 1913 to 27 per cent. in 1929 and to between 8 and 9 per cent. in 1936, in Germany it fell from over 50 per cent. in 1913 to 5.75 per cent. in 1928 and to 3.53 per cent. in 1933, in Great Britain from 11 per cent. in 1927 to 7 per cent. in 1935, and in Denmark from 77 per cent. in 1905 to 18 per cent. in 1913, to 7 per cent. in 1928 and to 6 per cent. in 1935. For the important margarine industry of Holland, which is of special international importance, similar figures cannot be given since in Holland statistics on the use as raw materials of oils and fats from land animals and from sea animals respectively are not separately presented.

The smaller use of animal oils and fats in the margarine industry was due either completely to the increased use of vegetable oils and fats, as was the case, for example, in the United States, or to the further increase in the use of whale-oil, as was the case in the most important European margarine-producing countries.

The kinds of vegetable oils and fats used vary from country to country, as we shall see in the subsequent consideration of individual countries, and is subject within a particular country to considerable fluctuations due to changes in the relative prices of the various raw materials that can be widely substituted for each other.

The importance that now attaches to the use of whale-oil can be seen from several facts. The percentage of whale-oil in the total quantity of oils and fats used by the margarine industry increased in Germany from 9.8 per cent. in 1924 to 15.9 per cent. in 1928 and to 39.1 per cent. in 1933, rose in Great Britain from 17 per cent. in 1928 to 37 per cent. in 1935, in Denmark from 1.5 per cent. in 1924 to 10.6 per cent. in 1928 and to 22.7 per cent. in 1935, and in Norway to 24.7 per cent. in 1925. The margarine industry of the United States, on the other hand, used no fish- and whale-oils.

The amount of whale-oil used in the last few years has thus not only not decreased but has actually increased. There is today no question of reduction of the import and use of whale-oil, so widely discussed during the crisis years; on the contrary, other countries besides Norway and England, especially Germany, Japan, and Russia, are now seeking to increase their share in the output of whale-oil. Only the fear that through too intensive exploitation the supply of whale-oil may be exhausted and whale fishing become unprofitable has induced several countries to agree to a limitation of the output of whale-oil. After the exceptionally large output of whale-oil in the years 1930-31 had resulted in a complete collapse of prices, the Norwegian whale fleet and a large part of the fishing fleet of other lands, which however were relatively of minor importance, did not go to the whale fields; and in each year from 1932-33 the output was limited by an agreement between the most important countries concerned, on at first the length of the whale fishing season and, later, the number of whale-catching ships to each floating factory. With about 2.6 million barrels in 1932-33 and in 1933-34, 2.7 millions 1934-35, 2.9 millions 1935-36 and probably 2.6 millions in 1936-37 the output of whale-oil remained considerably lower than the record figure of almost 3.7 million barrels reached in 1930-31. On the initiative of the British Government there met in London at the end of May 1937 a Conference to regulate whaling for 1937-38. The discussions led to an agreement signed by

TABLE I. — *Production of Margarine and other Artificial Fats.*
(In thousands of quintals).

	1913	1924	1928	1929	1930	1931	1932	1933	1934	1935	1936
1) <i>United States</i> ...											
Margarine	600	1,052	1,436	1,616	1,477	1,043	922	1,113	1,109	1,731	...
Lard compound	4,536	3,768	5,186	5,534	5,494	5,314	4,288	4,321	5,463	7,016	...
2) <i>Germany</i>											
Margarine . . . . .	...	...	4,368	...	...	...	5,100	4,055	3,817	4,072	4,233
Mixed artificial fats . . . . .	...	...	171	...	...	...	...	169	122	129	136
Pure vegetable fats . . . . .	...	...	328	...	...	...	...	423	...	...	...
<i>Total</i>	2,000	3,400	4,867	...	...	...	...	4,647	...	...	...
3) <i>United Kingdom</i>											
Margarine	(2) 818	1,864	...	...	2,049	...	...	1,753	1,543	1,779	...
Lard compound . . . . .	...	256	...	...	451	...	...	560	574	...	...
4) <i>Denmark</i>											
Margarine	420	694	765	789	826	793	733	743	717	780	...
Palmitine . . . . .	...	...	...	...	5	8	11	14	12	15	...
Lard compound . . . . .	...	...	...	...	15	20	16	16	11	17	...
5) <i>Netherlands</i>											
Margarine	884	1,308	1,399	1,327	1,276	1,113	(3) 627	(3) 517	(3) 525	(3) 532	(3) 555
Fats used for cooking and in bakeries, and other refined fats and oils . . . . .	...	234	358	378	319	204	39	38	41	69	66
6) <i>Czechoslovakia</i> ...											
Margarine . . . . .	...	...	...	...	...	...	...	...	608	603	...
7) <i>Sweden</i>											
Margarine	236	298	507	552	531	497	499	502	533	559	...
Artificial fats	9	2	7	8	10	5	4	7	7	12	...
Coco fat	3	10	9	11	11	12	11	12	14	17	...
8) <i>Norway</i>											
Margarine	274	429	466	472	473	474	479	481	495	513	553
Artificial lard . . . . .	...	...	4	4	3	3	6	7	11	15	14
9) <i>U. S. S. R.</i> (4) ..											
Margarine	0	0	0	0	63	173	333	382	320	...	...
Vegetable fat compounds	0	0	0	0	0	25	44	30	270	...	...
Animal fat compounds	0	0	0	0	0	2	5	96	94	...	...
10) <i>Belgium</i>											
Margarine	101	281	444	493	444	340	282	347	382	458	...
11) <i>Finland</i>											
Margarine . . . . .	...	48	98	100	84	72	63	85	83	...	...
12) <i>Japan</i>											
Margarine . . . . .	...	...	...	...	...	...	11	16	16	...	...

(1) From 1 April 1935, including the Saar. — (2) The figure for 1912. — (3) Excluding the amount of butter admitted according to state regulations. — (4) There was no production before 1930.

the representatives of Norway, Great Britain and Northern Ireland, the Argentine Republic, the United States, the Union of South Africa, Australia, Germany, the Irish Free State, and New Zealand. Canada and Portugal were represented at the conference by observers. It is hoped that these two countries and also Japan, which was the most important country not represented, will be parties to the agreement if not in this year at least in subsequent years. This agreement, which is much more far-reaching than the Geneva agreement of 1931 and the subsequent understanding between Great Britain and Norway, will be in force in the first instance until 30 June 1938. In the agreement there are no new principals adopted. For pelagic whaling, that is whaling carried on by whale-catching ships attached to floating factories, there will be a close season for nine months of the year, except in the first year of the operation of the agreement when the open season will be extended by one week. Whaling at land stations is to be subject to a six months close season for each station. North of 40 deg. Southern Latitude as far as the Equator, and in wide areas North of the Equator whaling is absolutely forbidden. South of 40 deg. Latitude South floating factories and whale catching ships can in general operate only from 8 December to 7 March. Certain species of whales whose extinction is already threatened are protected absolutely, and so are all whale calves and female whales attended by calves. It is also forbidden to kill whales of less than a certain length. Caught whales must be completely utilized.

TABLE II. — *Output of Whale-oil.*

(In thousands of barrels) (1).

Year	Total for all countries	Countries					
		Norway	Great Britain	Argentina	Japan	United States	other countries
1909-10	(2) 284	180	64	—	—	—	40
1912-13	(2) 766	590	133	—	—	—	43
1919-20	407	211	137	—	—	—	59
1924-25	1,040	597	347	—	—	—	96
1925-26	1,153	663	380	—	—	—	110
1926-27	1,192	689	389	—	—	—	114
1927-28	1,321	799	400	—	—	—	122
1928-29	1,886	1,210	513	97	7	36	23
1929-30	2,799	1,796	857	95	...	30	21
1930-31	3,687	2,317	1,131	88	16	50	85
1931-32	916	29	804	49	20	14	—
1932-33	2,597	1,317	1,180	55	22	13	10
1933-34	2,573	1,254	1,190	66	23	25	15
1934-35	2,691	1,239	1,289	53	42	25	43
1935-36	2,871	1,163	1,239	75	74	81	(3) 239

Source: "International Whaling Statistics" Edited by the Committee for Whaling Statistics appointed by the Norwegian government; Oslo 1930-1936.

(1) 1 barrel = 1/6 ton; 1 ton = 1016 kg. — (2) without the production of South Pacific and Japan for which there are no figures. — (3) Of which 205,801 barrels are from Panama, 18,238 from Russia, 8,789 from Chili, 2,972 from Denmark, and 3,415 from Iceland.

The aim, expressed in the agreement, to make the catch correspond to the natural increase will, provided that the agreement is kept and later extended, not only assure the profitability of whaling but also eliminate an important disturbing factor in the market in fats.

Another tendency in the margarine industry in several countries was the increase in the use of imported raw materials during the last decades. This was undoubtedly a natural result of the insufficient output of oils and fats in the most important margarine-producing countries. The home production remained more and more below the increasing need, and the production of margarine was the cheapest way of providing the balance. A change in this position occurred first at the beginning of the crisis. The raw material imported for margarine production not only supplied the unsatisfied needs but also checked the use of home-produced oil and fats, the production of which was thus made unprofitable. Oils and fats from tropical and subtropical areas with low costs and from areas with low wages or mechanised production, and fish- and whale-oils, provided a competition which the products of agriculture and above all of peasant agriculture of more highly developed countries could not meet. In Germany, the country with the largest output of margarine, the percentage of home-produced oils and fats in the total oils and fats used as raw materials by the margarine industry was in 1932 between 2 and 3 per cent. Now, Germany is a country with a large demand for oils and fats and with a home production of fats covering only about half of the domestic demand for food fats, but the position was the same in other countries with larger home production, large unutilised possibilities of further home production, and already having difficulties in marketing home-produced oils and fats. The best example of this can be found in the United States. Here home-produced oils and fats as a percentage of the total oils and fats used as raw materials by the margarine industry fell from 74 per cent. in 1919 to 51 per cent. in 1926, to 35 per cent. in 1930 and finally to 25 per cent. in 1933.

This increase in the use of foreign oils and fats has during the last few years, in several countries been not only checked but also partly reversed by a widely extending regulation of the fats market. Dependence on foreign sources for a large part of the fats supply is in many countries considered to be very undesirable from more than one point of view. Systematic measures were taken to regulate the fats supply. A reduction of the use of foreign raw materials was achieved in several countries by making it temporarily compulsory to add butter to margarine. In other countries there is compulsion to use other home-produced raw materials, or a tax preference in their favour. Particularly interesting from this point of view is again the position in the United States. Through the joint operation of several measures, customs, special levies and taxes, on imported raw materials or on margarine produced from these raw materials, the proportion of home-produced oils and fats increased from the figure of 25 per cent. to which it had fallen in 1933 to 43 per cent in 1934-35 and 47 per cent. in 1936.

The increase in the use of whale-oil was the result not only of the smaller supply of oil raw materials on the world market but also of the attempt to make the fats supply independent of imports from foreign countries. Other countries joined, sometimes at considerable costs, with Norway and Great Britain

in the whaling industry as it was thus possible to obtain a raw material not controlled by a foreign state and which did not involve the use of foreign exchange.

Table I shows not only the output of margarine but also the output of artificial food-fats (lard compound, pure vegetable- and similar food-fats) and thus presents a general picture of the total output of artificial fats. From the point of view of their manufacture there are close connections between the different kinds of artificial fats. The country most important in the production of the so-called artificial food-fats is the United States. In the fat supply of this country lard compounds are much more important than margarine. Thus in 1934 the output of lard compounds was 5.2 million quintals against an output of 1.2 million quintals of margarine; and when in the following years the output of margarine increased, that of lard compounds probably also increased. Also in the United Kingdom the production of lard compounds has a certain importance; here production has increased very considerably during the last ten years and even during the crisis, and particularly after the reduction of the import of lard from the United States in 1935-36. The next most important producing country is Russia, where production was first undertaken in 1931. In all other countries referred to in the Table lard compounds and other similar artificial food-fats constitute only a small part of the total output of artificial food-fats. This is certainly not to say, however, that this production is of only small importance; it is important especially locally, for like margarine consumption the use of other artificial food-fats is often concentrated in particular regions. In all countries production has increased in the last few years. Where production increased even during the crisis years this may be partly attributed to restriction of margarine production. In general, however, these food-fats, on account of their quality, compete less with butter and margarine than with lard and salted fat pork. This can be seen for example in the case of the United States.

This is a brief summary of the most important tendencies in the margarine industry which have been in operation in the last few years. We shall now make a more complete survey of the developments in the most important margarine-producing countries.

The Trend of Margarine Production in the most important Producing Countries.

United States. — The production and sale of margarine in the United States is subject to severe limitations imposed by both the Federal Government and the governments of the individual states. The first law passed by the Federal Government was the Oleomargarine Act of 1886 which made it compulsory to designate margarine "Oleomargarine", and which imposed special occupational taxes of 600 dollars on margarine producers, of 480 dollars on wholesale dealers, and 48 dollars on retail dealers, and further a stamp tax of 2 cents per pound, payable by the producer, and an import duty of 15 cents per pound.

The Oleomargarine Act was subsequently amended six times. In 1902 the stamp tax was raised from 2 cents to 10 cents per pound for coloured margarine and to $\frac{1}{4}$ cent per pound for uncoloured margarine. At the same time the spe-

cial occupational tax was reduced in respect of uncoloured margarine to 200 dollars on wholesale dealers and to six dollars for retail dealers. Another important amendment came in 1931. The 10 cents tax on coloured margarine was made general for yellow margarine since the tendency was increasingly towards the use of palm oil, soybean oil and yellow oleo-oil which produced a margarine with a natural yellow colour. The result is that margarine must in practice have a white colour in order to avoid the higher taxes. The Act did not in fact forbid the packing of small quantities of colouring matter in manufacturers' original packages. Also the method of colouring may be stated on the package provided that there is also a statement concerning the conditions under which the colouring process is allowed without breaking the law. According to a Regulation from the United States Bureau of Internal Revenue the following persons may colour margarine:

" A private individual for use of his own family, household servants, and " non-paying guests;

" All institutions under complete control of the United States, a state or " political subdivision thereof for use of inmates or employees of such institutions;

" Co-operative clubs or fraternities for use of members where boarding expenses of members are pro-rated and meals are not served to other persons for " compensation."

The use of oleomargarine in Federal Institutions is free from taxes; special decrees of the War Department, of the Veterans Bureau, and the Department of Interior demand however that no part of the money appropriated shall be used for the purchase of oleomargarine or other butter substitutes for other purposes than for cooking.

The customs duty on oleomargarine in the Tariff Act of 1922 was 8 cents per pound, and in 1930 was raised to 14 cents. Further, in 1930 duties were placed on all oils and fats commonly used in the margarine industry. In addition, further charges were placed by the Revenue Act of April 1934 on almost all the oils and fats useful for margarine industry with the exception of cottonseed oil, corn oil, soybean oil and babassu oil; these charges were in the form of an excise tax of 3 cents per pound on first domestic processing.

Under the full powers granted by the Oleomargarine Act the Bureau of Internal Revenue made on 9 April 1936 an order that on every package of oleomargarine the word "Oleomargarine" should be marked in letters of 3/4 of an inch tall. Other orders regulate advertising.

In addition to the Federal Government measures there existed in the middle of 1936 in all states, excluding Arizona, state regulations of some kind or other concerning margarine, and in many cases these alone or in conjunction with the Federal measures were so severe that they were in effect prohibitive of the production and sale of oleomargarine. Of the measures state excise taxes must first be considered. In June 1936 eight states imposed taxes of 5, 10, or 15 cents, on all margarine offered for sale, without exception. In 16 states, including all the cotton states, there were taxes of between 10 and 15 cents on all margarine which contained other than certain given home-produced raw materials or did not contain a given percentage of animal fats and home-produced raw material.

Further in 18 states a licence and a licence fee is imposed on most or all of the following concerns: margarine producers, wholesale and retail dealers in margarine, and restaurants, hotels and boarding houses which serve margarine to their guests. The licence fees are in several cases very small and are only a few dollars but in other cases they amount to a considerable sum. In the state of Pennsylvania the licence fee for manufacturers is 1000 dollars, for retail dealers 100 dollars, for restaurant and hotels 50 dollars, and for boarding houses 10 dollars.

The list of government measures is not yet exhausted. In 31 states the sale of yellow margarine is prohibited, and in 20 states the use of margarine in charitable, penal, or other institutions (sometimes excepting penal institutions), receiving the assistance from the State is also prohibited. In other states hotels, restaurants, and boarding houses, serving margarine to their guests have to notify the guests that it is margarine.

It is easy to see the purpose of all these measures. While the original intention was to protect in the first place the butter market and also the consumer of butter, at the present time measures taken have in addition the object of protecting the market for all home-produced oils and fats. Measures taken have been successful. Without them the use of margarine would in the last few years have become much more general, especially in view of the position of the market for oils and fats, and the margarine industry would have used a continuously increasing amount of foreign raw materials.

The trend in margarine production is shown in table III.

TABLE III. — *Production of Butter, Oleomargarine, Lard, and Lard compound, in the U. S. A.*
(In thousands of quintals).

Year	Butter	Oleomargarine	Lard	Lard compound
1913	7,271	690	7,625	4,536
1924	9,444	1,052	12,456	3,767
1925	9,149	1,061	10,083	5,228
1926	9,194	1,100	10,541	5,174
1927	9,417	1,259	10,687	5,348
1928	9,362	1,436	11,766	5,186
1929	9,793	1,616	11,784	5,534
1930	9,598	1,477	10,632	5,494
1931	9,965	1,043	10,818	5,314
1932	10,251	922	11,172	4,288
1933	10,487	1,113	11,653	4,321
1934	10,065	1,199	9,811	5,463
1935	9,802	1,731	5,951	7,016
1936	9,639	...	7,602	...

Sources: (from 1913 up to 1935) UNITED STATES DEPARTMENT OF AGRICULTURE, *Oleomargarine, — Statistics of Production, Materials and Manufacture, Consumption, Trade and Prices*; Washington, D. C., August, 1936. — (For 1936) UNITED STATES DEPARTMENT OF AGRICULTURE, *The fats and oil situation*, March 1937.

It can be seen that production decreased considerably after 1930, as the result of the intensification of state restrictions, but that it increased again after 1933 on account of the changed position of the market in oils and fats. Consumption, however, varied very considerably, from one state to another. In certain states the market for margarine was completely, or almost completely, destroyed. The influence of additional state taxes in this respect can be seen in table IV which shows the number of retail dealers holding a licence to sell margarine in 1928 when there were no excise taxes, and the number in the middle of 1935, when 17 states had introduced excise taxes.

TABLE IV. — *Numbers of Uncoloured-Oleomargarine Retail Dealers in the U. S. A. in 1928 and 1935.*

	1928	1935
	Thousands	Thousands
In 6 States taxing all oleomargarine 6 to 15 cents per pound	17	1
In 3 States taxing uncoloured oleomargarine 5 cents per pound	9	4
In 8 States taxing oleomargarine containing imported materials 10 to 15 cents per pound	24	21
In 31 States without excise taxes (1)	123	129
Total	173	155

Source: UNITED STATES DEPARTMENT OF AGRICULTURE, Bureau of Agricultural Economics, State and Federal Legislation and Decisions Relating to Oleomargarine; Washington, D. C., June 1936.

(1) Of these States, seven enacted laws imposing excise taxes between February and June 1935.

TABLE V. — *The Amount of the Different Kinds of Margarine Produced in the United States as a Percentage of the Total Production.*

Calendar Year	Oleomargarine (uncoloured)			Oleomargarine (coloured)			Total
	Combined Animal and Vegetable Oil	Exclusive of Vegetable Oil	Exclusive of Animal Oil	Combined Animal and Vegetable Oil	Exclusive of Vegetable Oil	Exclusive of Animal Oil	
1922	56.3	40.1	0.2	2.7	0.7	...	100
1926	45.6	48.7	...	3.6	2.1	...	100
1930	27.9	67.7	...	2.9	1.5	...	100
1934	20.0	78.9	...	0.8	0.3	...	100

Source: UNITED STATES DEPARTMENT OF AGRICULTURE, Bureau of Agricultural Economics, Oleomargarine, - Statistics of Production, Materials used in Manufacture, Consumption, Trade and Prices; Washington, D. C., August, 1936.

Grouping the states according to the size, relatively to the kind of excise tax it appears that a general sales tax of six cents is severely restrictive while a tax of ten cents and over has a prohibitive effect.

The effect of the measures against the colouring of margarine can be seen in the following table.

The share of coloured margarine which was already small fell in 1934 to 1-2 per cent, and the share of margarine made from vegetable oils and fats continuously increased. Since 1925 margarine made from animal fats only has no longer been shown. At the time of writing this article there are no data on the

TABLE VI. — *Fats and Oils (excluding milk) used in the Manufacture of Oleomargarine in the United States.*

	Animal fats and oils					Vegetable oils			Other fats and oils (1) %
	Oleo-oil %	Lard neutral %	Oleo-stearine %	Oleo-stock %	Butter %	Coconut %	Cotton-seed %	Peanut %	
Year beginning July									
1913. . . .	47	19	1	—	5	(2) —	19	3	6
1919. . . .	29	12	1	2	2	26	13	15	(2) —
1920. . . .	21	13	2	1	1	44	8	7	3
1921. . . .	25	17	3	1	1	36	10	7	—
1922. . . .	26	17	3	1	1	37	11	4	—
1923. . . .	25	16	3	1	1	41	10	3	(2) —
1924. . . .	24	14	3	2	1	43	11	2	(2) —
1925. . . .	22	12	2	1	1	46	12	3	1
1926. . . .	22	11	2	1	1	49	11	2	1
1927. . . .	18	10	2	1	1	56	10	2	(2) —
1928. . . .	16	8	2	(2) —	1	60	10	2	1
1929. . . .	15	7	2	(2) —	1	62	10	2	1
Calendar year									
1930. . . .	14	5	2	(2) —	1	64	10	2	2
1931. . . .	10	5	3	(2) —	(2) —	70	8	2	2
1932. . . .	7	6	2	(2) —	(2) —	74	9	2	(2) —
1933. . . .	8	5	2	(2) —	(2) —	75	9	1	(2) —
1934. . . .	10	3	2	1	(2) —	57	25	1	1
1935. . . .	6	1	1	1	(2) —	56	32	1	(3) 2
1936. . . .	5	1	1	1	(2) —	46	33	1	(4) 12

Source: 1913 and 1919 up to 1935: UNITED STATES DEPARTMENT OF AGRICULTURE, *Oleomargarine, — Statistics of Production used in Manufacture, Consumption, Trade, and Prices*, Washington, D. C., August, 1936. — 1936: UNITED STATES DEPARTMENT OF AGRICULTURE, *The Fats and Oils Situation*; Washington, March 1937.

(1) Includes negligible quantities of cream reported 1913-14 to 1916-17, and unnamed oils in 1920-21, 1934-35, and edible, tallow, and the following, oils: corn, soybean, mustard, palm, sesame, palm-kernel, sunflower, and babassu as reported. — (2) Less than one-half of 1 per cent. — (3) Includes 1 percent babassu. — (4) Includes 5 per cent. babassu oil, 5 per cent. soybean oil, and 1 per cent. palm-kernel oil.

effect of the measures taken in the last few years that would allow us to say whether they will lead to a new increase in the amount of margarine containing partly animal oils and fats.

The change from animal to vegetable raw materials is seen even more clearly from table VI. While in 1914 animal fats made three quarters of the oils and fats used by the margarine industry, in 1919 they made only 46 per cent. and the percentage continuously decreased until in 1936 it finally reached 8 per cent. The increasing use of vegetable oils was concentrated mainly on coconut oil. This oil had the advantage over most other foreign raw materials of the margarine industry that it could be imported from the Philippine Islands and other possessions of the United States and was not therefore subject to customs duty. Coconut oil represented in 1932 75 per cent. of the total oils and fats used by margarine. After 1933 the percentage decreased, principally as the result of the excise tax of 3 cents per pound, while the use of cotton-seed oil further increased.

In addition to coconut oil and cotton-seed oil two other oils have become important in margarine production in the last two years, namely soyabean and babassu oil. Soyabean oil, which was first used in 1934 and was in 1935 only

TABLE VII. — *Fats and Oils Used in the Lard Compound Industry of the United States.*

	1932 %	1933 %	1934 %
Cotton-seed oil	86.1	87.7	87.2
Peanut oil	0.4	0.3	0.7
Coconut oil	0.9	0.7	0.7
Corn oil	0.3	0.1	0.2
Soybean oil	0.5	0.1	0.2
Rapeseed oil . . . . .	...	...	0.0
Palm oil	2.3	2.2	1.4
Sesame oil	0.8	0.8	0.4
Sunflower oil . . . . .	...	0.3	0.1
Other vegetable oils	0.1	...	0.1
	91.4	92.2	91.0
Lard	0.6	0.3	0.2
Edible animal stearin	1.8	1.8	1.8
Oleo oil	0.1	0.0	0.1
Edible tallow	4.7	4.8	6.0
Marine animal oils	0.2	...	0.0
Fish oil	1.2	0.9	0.9
Total	100	100	100

Source: U. S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS, Animal and Vegetable Fats and Oils, — Production, Consumption, Imports, Exports and Stocks, Quarterly for Calendar Years 1930 to 1934; Washington, 1935.

$\frac{1}{2}$ per cent. of the total used, represented in 1936 5 per cent. of the total. Babassu oil, which is imported free from Brazil under a Trade Agreement signed on 1 January 1936 and remaining in force for three years, and which is not subject to excise duty, has been used by the margarine industry since 1935. Until then it was practically unknown in the United States. In 1936 babassu oil made 5 per cent. of the oils and fats used by the margarine industry and a further increase is to be expected.

With the further increasing use of cotton-seed oil, of large quantities of soyabean oil, peanut oil, and corn oil the share of home-produced oils and fats in the total fats and oils used as raw material in the margarine industry, which fell from 74 per cent. in 1919 to 25 per cent. in 1933, increased again to 47 per cent. in 1936.

Table III shows the trend also in the production of lard compound which is similar to that of margarine production. There are only insignificant changes to be recorded concerning the raw material used in this case. The most important raw material has, since the first decade of the century, been cotton-seed oil. In 1912 this made almost 93 per cent. of the total oils and fats used. At the present time the percentage is nearly the same. In contrast with the margarine industry the lard compound industry uses but very small amounts relatively of fish and whale oils.

TABLE VIII. — *Per Capita Consumption of Butter, Oleomargarine, Lard, and Lard Compound in the U. S. A.*

Calendar year	Butter kg	Oleomargarine kg	Lard kg	Compounds kg	Total kg
1913	7.53	0.73	5.17	4.35	17.78
1920	6.71	1.54	6.03	3.04	17.33
1921	7.35	0.91	5.13	3.22	16.60
1922	7.76	0.77	6.44	3.04	18.01
1923	8.12	0.91	6.94	2.99	18.96
1924	8.21	0.91	6.99	3.22	19.32
1925	8.03	0.91	6.03	4.45	19.41
1926	7.94	0.95	6.17	4.35	19.41
1927	7.94	1.04	6.26	4.45	19.69
1928	7.80	1.18	6.67	4.26	19.91
1929	7.89	1.32	6.49	4.49	20.19
1930	7.85	1.18	6.26	4.45	19.73
1931	8.17	0.86	6.53	4.26	19.82
1932	8.21	0.73	6.89	3.40	19.23
1933	7.98	0.86	6.71	3.45	19.01
1934	8.17	0.95	6.17	4.13	19.41
1935 (1)	7.80	1.36	4.17	5.53	18.87

Source: UNITED STATES DEPARTMENT OF AGRICULTURE, Bureau of Agricultural Economics, Oleomargarine, — Statistics of Production, Materials used in Manufacture, Consumption, Trade and Prices; Washington, D. C., August, 1936.

(1) Preliminary.

As we have shown there are many factors affecting the trend of margarine production and consumption in the United States. Under the conditions created by the state regulation the price relation with butter still appears in spite of everything to be of overwhelming importance. Though only a small proportion of the output of margarine is coloured margarine yet this is used as, so to say, "spread for bread". Use of margarine as fat for cooking and baking should not be so great, as for these purposes a large supply of two other home-produced fats, lard and lard compound, is generally available at more advantageous prices.

TABLE IX. — *Average Price of Butter and Oleomargarine in the U. S. A.*

Year	Butter, 92° New York cents per pound	Oleomargarine, nut, Chicago cents per pound
1920	61.4	28.8
1921	43.3	22.0
1922	40.7	19.4
1923	46.9	20.2
1924	42.6	21.1
1925	45.3	21.3
1926	44.4	21.5
1927	47.3	17.9
1928	47.4	17.3
1929	45.0	17.5
1930	36.5	16.9
1931	28.3	12.7
1932	21.0	8.8
1933	21.7	8.2
1934	25.7	9.1
1935	29.8	12.6
1936	33.0	15.3

Source: UNITED STATES DEPARTMENT OF AGRICULTURE, Bureau of Agricultural Economics, The Fats and Oils Situation; Washington, March 1937.

Germany. — The output of margarine in Germany, which in 1913 was between 2 and 2.2 million quintals, increased to 3.4 millions in 1924 and then to 4.37 millions in 1928, and to 5.1 millions in 1932. Under the Fat Regulation plan of 23 March 1933 which aimed at the increase of home-production and reduction of imports there was imposed a production quota fixed at about 60 per cent. The law provided directly for the use of home-produced fat and at the same time for an admixture of home-produced lard in margarine production and further introduced an excise duty on margarine in order to weaken the competitive power of margarine. The production of artificial fat was limited at the same time.

The amount of lard to be admixed was fixed at first for the months of November and December 1933 at 5 per cent. of the total output of margarine and then at 10 per cent. for January 1934, at 12.5 per cent. for the period February to September 1934 and 10 per cent. for October 1934. In November 1934 this provision for mixing of lard was abolished.

The system of a production quota was administered at first through the Central Oils and Fats Office. Later the duty of fixing quotas was transferred to the central organisation of the margarine and artificial fat industries created by an Order of 23 July 1934, an organisation which is under the general control of the Minister for Food and Agriculture. The output of margarine fell in 1933 to 4.05 million quintals and in 1934 to 3.82 million quintals. In 1935 the output during the period from January to September was even less than in the previous year but in the last quarter of the year the quota was raised again as a result of shorter supplies of butter and other fats, and the total production for 1935 finally reached 4.07 million quintals. Production in 1936 further increased for the same reasons.

As a result of the decrease in the output of margarine it became necessary to assure a supply of fats at low prices to the poorer classes of the community. These questions were solved firstly through the introduction of various kinds of margarine with fixed retail prices for the cheapest kinds, and secondly, through the introduction of a fat supply at reduced prices, for certain categories of consumers, and the limitation of the supply of cheap margarine to certain classes of people.

TABLE X. — *The Trend of Fat Consumption in Germany (1)
expressed in terms of Pure Fat (2)*

Products	1909/13	1935	1909/13	1935	1909/13	1935
	1000 quintals		kg per head		kg per consumption unit	
Butter	3,570	4,260	5.4	6.4	6.6	7.3
Fat pork and lard	3,920	3,670	6.0	5.5	7.2	6.3
Edible tallow	350	350	0.5	0.5	0.6	0.6
Margarine	1,680	3,490	2.6	5.2	3.1	6.0
Vegetable table-oils	1,000	1,450	1.5	2.2	1.8	2.5
Unmixed vegetable edible fats	200	490	0.3	0.7	0.4	0.8
Total . . .	10,720	13,710	16.3	20.5	19.7	23.5
Index figure 1909-13 = 100 .	100	128	100	126	100	119

Source: Dr. H. v. d. DECKEN, Die Verschlebung beim Nahrungsmittelverbrauch seit der Vorkriegszeit. Die Ernährung, Zeitschrift für das gesamte Ernährungswesen, Band II, Heft 3, Leipzig 1937.

(1) Present area. — (2) In order to allow the computation of a total figure, the individual figures are expressed in terms of pure fat. To arrive at a figure expressed in terms of pure fat the following deductions are made: Butter, 15 per cent.; fat pork and lard, 25 per cent.; edible tallow 20 per cent.; Margarine, 16 per cent.; imported fat pork, 15 per cent.; imported lard, 5 per cent.

The most important fact concerning the future development of the German margarine industry is that in spite of the measures taken up to the present time with the object of increasing the home production of fats, home production covers only 55 per cent. of the need for food-fats, and that there are severe difficulties in

the way of a further increase of fat production (1). In these circumstances an adequate fats supply is inconceivable independently of a large output of margarine.

The trend of the consumption of fat per head of the population in Germany has been as follows:

TABLE XI. — *Consumption of Fats in Germany in Kilogrammes per Head (1).*

	1913	1932	1933	1934	1935
Butter	6.2	7.2	7.3	7.2	7.4
Fat pork and lard	7.4	7.8	7.4	7.1	6.4
Margarine, artificial food fats, and vegetable fats	3.3	9.3	7.6	7.4	7.3
Table oil	1.5	2.0	1.9	1.8	1.8
Total	18.4	26.3	24.3	23.5	22.9

TABLE XII. — *Fats and Oils used in the Margarine and Food Fats Industries of Germany*

Raw materials	1928		1933	
	1000 quintals	%	1000 quintals	%
Premier jus	104	2.48	48	1.22
Oleomargarine	85	2.03	14	0.35
Lard	45	1.07	57	1.45
Other animal fats	4	1.10	20	0.51
Pressed tallow	3	0.07	—	...
Total animal fats	241	5.75	139	3.53
Hardened marine animal oil	659	15.74	1,536	39.05
Hardened vegetable fats	912	21.78	443	11.26
Coconut fat	862	20.58	484	12.30
Palm-kernel fat	358	8.55	468	11.90
Palm fat	50	1.19	—	...
Soybean oil	442	10.55	465	11.82
Ground-nut oil	425	10.15	262	6.66
Cotton-seed oil	22	0.53	—	...
Sesam oil	12	0.29	—	...
Linseed oil	—	...	64	1.63
Other vegetable oils and fats	205	4.89	73	1.85
Total vegetable oils and fat	3,288	78.51	2,259	57.42
General total	4,188	100.00	3,934	100.00

Source: Statistisches Jahrbuch für das deutsche Reich.

(1) BACKE, Warum wurde eine neue Regelung des Fettverbrauchs und Fettbezuges notwendig? Der Vierjahresplan, Zeitschrift für nationalsozialistische Wirtschaftspolitik, 1. Jahrgang, No. 1, Berlin 1937.

United Kingdom of Great Britain and Northern Ireland. — The margarine supply in Great Britain and Northern Ireland, almost half of which came from imports in the pre-war years, became after the war more and more independent of imports. These imports came almost entirely from the Netherlands and fell continuously from 667,000 quintals in 1924 to 9,100 quintals in 1935. Since 1934 the amounts of exports, itself not large, was greater than the amount of imports.

The trend in margarine production and consumption in Great Britain is particularly interesting since in this case production and consumption have not been subject to limitations similar to those imposed in other countries. The relations of the price of margarine to that of other fats and the purchasing power of the consumer determined the trend. Thus, it was the result of the fall in butter prices that the consumption of butter continuously increased after 1929 while margarine consumption decreased. Following the change in the market position margarine consumption increased again after 1935. In contrast with the output of margarine, the output of lard compound increased even during the crisis; the increase was particularly great, however, after the reduction of the import of lard in 1935 determined by the small output in the United States.

TABLE XIII. — *Production and Consumption of Margarine and Lard Compound in the United Kingdom.*

Year	Production	Exports	Retained imports	Available for consumption in the United Kingdom
(In thousands of quintals)				
(a) <i>Margarine.</i>				
1907	448	9	446	885
1912	818	14	684	1,488
1924	1,864	22	667	2,509
1930	2,049	47	428	2,430
1933	1,753	18	16	1,751
1934	1,543	16	10	1,537
1935	1,779	20	9	1,768
(b) <i>Lard compound.</i>				
1924	(1) 256	22	41	275
1930	452	30	37	458
1933	560	18	8	550
1934	574	20	5	559

Source: Final Report on the Third Census of Production of the United Kingdom (1924), London, 1931. — Final Report on the Fourth Census of Production (1930), London, 1934. — Report on the Import Duties Act Inquiry (1934), Part I. London, 1936. — Board of Trade Journal, No. 2105, 8 April 1937.

(1) So far as recorded separately.

TABLE XIV. — *Trend of Prices and Consumption of Butter and Margarine in the United Kingdom.*

Year	Trend of prices (1)			Consumption per capita (2)	
	Salted butter per pound	Margarine per pound	Price of butter as per cent. of price of margarine	Butter	Margarine
	s. d.	d.		kg	kg
1919	1 10.3	7.3	305.48	8 —	5.85
1930	1 6.7	7.3	256.16	8.48	5.35
1931	1 3.6	7.1	222.54	9.48	4.67
1932	1 2.4	6.8	213.33	9.84	4.17
1933	1 0.4	6.1	203.28	10.66	3.81
1934	0 11.4	5.6	203.57	11.43	3.58
1935	1 0.6	5.4	233.33	11.43	3.81
1936	1 1.8	5.8	237.93	—	3.90

(1) Compiled from the *Ministry of Labour Gazette*. — (2) *Société des Nations, Le Problème de l'Alimentation*, Volume IV, statistique de la production et de la consommation et des prix, documentation préparée par l'Institut International d'Agriculture; Genève, 1936.

TABLE XV. — *Oils and Fats used in the Manufacture of Margarine in the United Kingdom by Reporting Firms (1).*

(In thousand of quintals).

Constituents	1927	1928	1929	1930	1931	1932	1933	1934	1935
<i>Vegetable oils and fats:</i>									
Coconut	447	569	579	457	457	367	285	244	315
Ground-nut	173	183	315	325	285	122	132	112	81
Cottonseed	203	173	162	193	152	132	51	152	122
Palm kernel	224	142	112	183	112	183	142	163	163
Soybean	122	112	41	61	71	142	142	71	122
Sunflower seed	—	61	112	41	31	112	71	—	—
Miscellaneous	20	20	20	41	20	30	20	31	30
Total	1,189	1,260	1,341	1,301	1,128	1,097	843	773	833
<i>Animal oils and fats:</i>									
Oleo	92	61	71	51	31	21	21	10	31
Stearin	20	20	20	31	31	31	31	41	30
Butter	10	10	10	10	20	20	10	10	10
Premier jus	20	20	20	10	20	20	20	20	31
Lard	31	31	31	20	10	10	10	—	—
Total	173	142	152	122	112	102	92	81	102
Whale-oil	254	295	295	325	345	467	569	518	559
Grand Total	1,616	1,697	1,788	1,748	1,585	1,666	1,504	1,372	1,494

Source: IMPERIAL ECONOMIC COMMITTEE, *Vegetable oils and oilseeds*, London 1936.

(1) Compiled from returns from manufacturers responsible for about 90 per cent. of the total production.

The kinds of raw materials used in the production of margarine and lard compounds are shown in Tables XV and XVI. The most important change to be noticed is the absolute and relative increase in the use of whale-oil associated with a decrease in the use of, firstly, vegetable fats, and, secondly, animal fats.

TABLE XVI. — *Oils and Fats used in the Manufacture of Lard Compound in the United Kingdom by Reporting Firms (1)*
(In thousands of quintals).

Constituents	1927 (2)	1928 (2)	1929	1930	1931	1932	1933	1934	1935
<i>Vegetable oils and fats:</i>									
Cottonseed	122	112	142	142	142	142	163	213	203
Ground-nut	51	61	61	71	102	92	91	102	153
Soy-bean	51	61	61	61	61	92	92	61	132
Palm	(3) —	(3) —	21	21	20	20	20	20	31
Palm kernel	10	10	10	10	10	10	(3) —	(3) —	(3) —
Miscellaneous	(3) —	(3) —	(3) —	(3) —	(3) —	10	20	10	20
Total	234	244	295	305	335	366	386	406	539
<i>Animal oils and fats (principally stearine)</i>	10	10	10	10	10	10	10	10	10
<i>Marine oils (almost entirely whale)</i>	51	61	61	61	71	71	81	92	193
Grand Total	295	315	366	376	416	447	477	508	742

Source: IMPERIAL ECONOMIC COMMITTEE, Vegetable oils and oilseeds; London, 1936.

(1) Compiled from returns from manufacturers responsible for about 85 per cent. of the total production. — (2) Incomplete; omits one firm included in 1929 and subsequent years. The firm consumed about 2,000 tons of oils and fats in 1929. — (3) Less than 500 tons.

Denmark. — The output of the Danish margarine industry reached a record level in 1930 with a production of 826,000 quintals of margarine, 4,650 quintals of palmin and 15,400 quintals of lard compound. The increasing difficulties in the way of butter exports that arose in the following years followed by a considerable fall in butter prices, weakened directly, and indirectly as a result of government measures, the competition of margarine with butter. The output of margarine fell to 717,000 quintals in 1934, but later there was again an increase. The market position for butter improved slowly and the special measures to check margarine production were not renewed when the law expired at the end of November 1934.

Among the raw materials used by the margarine industry animal oils and fats are, as in other countries, of small relative importance, as can be seen from table XVII. Among vegetable oils and fats coco-oil is of chief importance. The

amount of this oil used fell till 1932 in both relative and absolute amounts, declining from 63.5 per cent of the total oils and fats used in 1924 to 32.7 per cent. in 1932; after that time it increased both relatively and absolutely and represented about 37 per cent. of the total in 1935. The considerable increase in the use of hardened animal oil (hardened whale-oil) and soybean oil in the last few years should be noticed.

The trend of butter and margarine consumption was as follows:

Year	Kilogrammes per Head	
	Butter	Margarine
1913	—	15.6
1929	5.9	22.6
1930	6.1	22.6
1931	6.8	22.1
1932	8.5	20.5
1933	9.6	20.5
1934	9.0	19.6
1935	9.5	21.2

The Netherlands. — The development of the margarine industry in the Netherlands in the last few years has been determined by two different facts, first the position of the butter market and the resulting government measures and second the decline in the important margarine export trade.

The increasing difficulties that have been in the way of the exports of butter and other dairy products since 1929 led, finally, to a very difficult position in the highly developed milk industry. Finally, on 10 July 1932 was passed the Milk Crisis Law of which one object was to assure to the milk industry a larger home market by means of restricting the competition of other fats with butter. The law imposed, among other things, an excise duty on all fats, including butter, the proceeds of which were to be used for the supporting of the milk industry. Margarine was subjected to the following regulations:

1. From 1 July 1932 margarine sold on the home market had to have an admixture of a given percentage of butter. The percentage was fixed at first at 25 per cent. and remained at this figure until 16 September 1935 with the exception of the period 3 April 1933 to 3 July 1933 when it was 40 per cent. and from 13 January 1935 to 6 May 1935 when it was 15 per cent. Then it was reduced to 10 per cent.

2. The same excise duty is payable on butter to be mixed with margarine as is payable on other butter for home consumption. This tax was at first 42 cents per kilogramme, was increased at the end of July 1932 to 55 cents and then was continually increased until it reached one gulden on 12 March 1933. After that the tax was varied slightly up and down according to the market position. Up to the middle of 1936 it fluctuated between 85 and 110 cents, and in the following months was temporarily reduced to 75 cents and in April 1937 to 70 cents.

TABLE XVII. — *Raw Materials used by the Margarine Industry in Denmark (1).*
(In quintals).

	1922	1924	1928	1932	1933	1934	1935
Oleomargarine	8,728	13,220	8,174	8,320	6,870	2,870	1,350
Animal stearin	2,923	1,262	589	480	530	670	620
Premier jus etc.	21,596	25,189	28,885	28,010	28,530	35,910	32,460
Neutral lard and other pork fats	5,061	5,094	5,636	6,830	7,360	17,580	4,530
Lard compound	165	—	5	30	20	20	240
Coco-nut oil	294,991	373,013	285,988	199,240	215,490	228,580	240,810
Palm fat	7,084	2,711	35,451	26,690	10,750	15,420	27,420
Ground-nut oil	17,328	28,061	35,936	20,930	15,960	11,800	11,590
Cotton-seed oil	40,234	22,256	43,689	21,190	8,540	12,400	4,190
Sesam oil	42,353	41,396	37,430	35,790	35,600	33,130	33,980
Soybean oil	21,239	38,577	42,671	63,220	79,380	82,840	97,460
Sunflower seed oil	—	18,229	13,212	18,640	7,330	180	6,320
Other vegetable oils	286	—	2,428	3,490	2,550	4,340	4,880
Hardened animal oil	8,305	8,700	67,748	109,680	153,540	115,060	146,640
Hardened vegetable oils	—	10,208	31,596	67,800	46,530	34,260	32,690
Total	470,193	587,918	639,528	610,340	619,080	595,060	645,180

Source: Danmarks Produktionsstatistik.

(1) With the exception of milk, salt, and other small amounts of fat and butter and some other materials.

3. Margarine may only be put on the market on the payment of a tax. This tax is not the same for all kinds of margarine. For the usual kind it was fixed at first at 15 cents per kilogramme but was later increased or decreased according to the size of the quota for butter mixing. When this mixing quota was reduced to 10 per cent. on 16 September 1935 the tax was increased to 46.5 cents and on 11 November 1935 it was fixed at 39 cents per kilogramme. Until the middle of 1936 it fluctuated about this figure. It was then, however gradually reduced until it reached 33.75 cents at the end of January 1937. From February it was again increased by small stages until it reached 42.7 cents on 30 May 1937.

TABLE XVIII. — *Production and Export Surplus of Butter and Margarine in the Netherlands.*

(In 1,000 quintals).

Year	Butter		Margarine	
	Production (1)	Export surplus (2)	Production (3) (1)	Export surplus (4)
Average 1921-25 . . . . .	...	260	1,114	779
1926	830	440	1,330	937
1927	851	461	1,401	921
1928	853	446	1,392	885
1929	867	453	1,320	720
1930	872	399	1,271	686
1931	848	289	1,110	543
1932	852	161	627	156
1933	881	277	517	116
1934	(5) 905	364	525	92
1935	(5) 962	466	532	58
1936	(5) 1,013	602	555	70

Source: *Maandschrift van het Centraal Bureau voor de Statistiek.*

(1) Net weight. — (2) Gross weight. (Net weight = gross weight less 9 per cent.). — (3) Output of margarine factories. Excluding butter used in the production of, or mixed with, margarine. — (4) Gross weight. (Net weight = gross weight less 15 per cent.). — (5) Excluding output of butter for own consumption for which there are no figures. This output was estimated a 23,000 quintals for 1934, 48,000 quintals for 1935 and 20,000 quintals for 1936.

4. In 1933 an agreement with the margarine industry limited the sale of margarine in the Netherlands to a weekly amount of 1,050 tons.

5. As these measures necessarily involved an increase in the price of margarine it was prescribed that the margarine industry should produce a given quantity of margarine without an admixture of butter, so called People's Margarine, for sale to the poor classes of the population at a fixed price.

Further measures regulating margarine output came in 1935. From 1935 the margarine industry had to use oil and fat raw materials produced in the Netherlands or the Netherlands Indies to an amount of at least 60 per cent. of the

TABLE XIX. — *Consumption of Butter and Margarine in the Netherlands.*

Year	Consumption of butter		Consumption of Margarine		Consumption of butter and margarine together (2) 1,000 quintals	Consumption per head of population				
	a (1) 1,000 quintals	b (1) 1,000 quintals	a (1) 1,000 quintals	b (1) 1,000 quintals		Butter		Margarine		
						a (1) kg.	b (1) kg.	a (1) kg.	b (1) kg.	
Average 1921-25	445	—	—	453	898	6.3	—	6.3	—	12.6
1926	430	—	—	552	974	5.8	—	7.4	—	13.2
1927	432	—	—	617	1,043	5.7	—	8.1	—	13.8
1928	447	—	—	647	1,087	5.8	—	8.4	—	14.2
1929	455	—	—	718	1,616	5.9	—	9.2	—	15.1
1930	510	—	—	701	1,206	6.5	—	8.9	—	15.4
1931	585	575 - 580	655 - 660	653	1,234	7.3	—	8.2	—	15.5
1932	705	637	563	495	1,200	8.7	7.8	6.9	6.1	14.8
1933	626	468	578	419	1,045	7.6	5.7	7.0	5.1	12.7
1934	605	474	577	446	1,051	7.3	5.7	6.9	5.4	12.7
1935	529	441	572	486	1,013	6.3	5.3	6.7	5.7	12.0
1936	480	434	536	489	969	—	—	—	—	—

Source: *Maandschrift van het Centraal Bureau voor de Statistiek*, 1927, No. 4; 1931 No. 4; 1935, No. 4; 1936, No. 5; 1937 No. 4.

(1) a. Including butter which after 1932 had to be mixed with margarine; b. Excluding butter which after 1932 had to be mixed with margarine. — (2) The total consumption of butter and margarine given in column 6 differs from the total of columns 2 and 5 since before 1932 margarine factories also used butter for the manufacture of margarine. The amount used during the period 1921-31 varied between 3,000 and 8,000 quintals, and this amount should be deducted from columns 2 and 5 to arrive at the total consumption.

total oils and fats used. Further, for January and February 1935 the use of marine-animal oil in margarine production was forbidden.

The effects of these measures are of particular interest, because there were strictly applied measures which had in part been definitely disapproved in other countries. It is however not easy to make a clear picture of the effects of the particular measures from the facts available which are given in the accompanying tables.

The consumption of butter decreased from year to year after the coming into force in 1932 of the measures mentioned above; consumption had increased considerably after the decrease in the butter price in 1930 and in 1932 had reached a record figure of 705,000 quintals. In 1936 the total butter consumption, including the butter mixed with margarine, was 480,000 quintals. While this decrease was taking place exports were increasing, and in 1935 the export surplus of butter reached a record figure and there was a further and considerable increase in 1936.

Margarine consumption decreased after 1929 in consequence of an increase in butter consumption. After the introduction of margarine regulations, there was a further decrease in 1932 and 1933. But from 1934 there was a slow increase in consumption.

TABLE XX. — *Average retail Price of Butter and Margarine in Amsterdam.*
(Cents per $\frac{1}{2}$ kilogramme).

Year	Butter	Margarine
1925	132.5	60
1926	117	60
1927	119	60
1928	123.5	60
1929	123	60
1930	104	60
1931	88	55
1932	80.5	47
1933	95	58
1934	88.5	59
1935	90.5	59

Source: Jaarcijfers voor Nederland: 1930, S. 117; 1933; S. 138; 1935, S. 138.

The consumption of butter and margarine together tended until 1932 to increase considerably as a result of falling prices. It now appears that the charges imposed in 1932 through various measures on butter and margarine had the result that the consumer used partly other oils and fats not subject to such large charges. The decline in butter and margarine consumption continued in 1936. The increasing use of other oils and fats was partly due to the fact that production of margarine in the home in order to avoid the paying of the excise duty gradually extended. In order to check the substitution by consumers of other fats the

TABLE XXI. — *The Consumption of Artificial Food Fats, Lard and Food Oils in the Netherlands.*

(in 1000 quintals).

	Artificial food fats, not including margarine		Lard		Food oils		Total	
	1935	1936	1935	1936	1935	1936	1935	1936
1st half-year	54.1	64.6	3.9	2.4	19.2	25.9	77.2	92.9
2nd "	48.0	86.3	3.0	3.4	28.3	52.0	79.3	141.7
3rd "	63.6	60.1	3.4	1.1	25.7	18.3	92.7	79.5
4th "	61.2	68.3	2.9	1.6	20.1	23.4	84.2	93.3
	226.9	279.3	13.2	8.5	93.3	119.6	333.4	407.4
Weekly average . . .	(1) 4.4	(2) 5.3	(1) 0.3	(2) 0.2	(1) 1.8	(2) 2.3	(1) 6.4	(2) 7.7

Source: *De Landbouw-Crisismaatregelen hunne Werking en Uitvoering XIII, Driemaandelijksch Verslag aan de Staten-Generaal* (Oct., Nov., Dec. 1936).

(1) 52 Weeks. — (2) 53 Weeks.

TABLE XXII. — *Raw Materials used in and Output of the Margarine Industry in the Netherlands.*

(In 1,000 quintals)

Year	Oils and fats used			Output	
	Animals oils and fats (1)	Vegetable oils and fats (2)	Butter	Margarine (including added butter)	Fats for cooking and baking and other refined fats
Average 1921-25 . . .	335.1	776.2	3.9	1,115.0	171.0
1926	260.7	1,182.2	8.0	1,343.8	285.9
1927	297.5	1,132.0	6.5	1,407.8	323.7
1928	395.4	1,175.1	6.7	1,399.3	358.2
1929	499.9	1,001.4	6.7	1,327.2	377.9
1930	710.4	682.7	5.0	1,276.1	319.0
1931	511.7	620.2	4.3	1,112.8	203.9
1932	212.0	351.4	55.0	681.5	393.0
1933	224.6	242.1	(3) 125.4	642.2	378.0
1934	201.7	272.1	(3) 105.4	630.0	406.0
1935	120.8	388.4	(3) 71.9	604.0	686.0
1936	118.1	408.1	(3) 37.7	593.0	664.0

Source: *Maandshrift van het Central Bureau voor de Statistiek*, 1927, N° 4, 1931, N° 4, 1934, N° 5, 1935, N° 4, 1936, N° 5, et 1937, N° 4.

(1) Oleomargarine, premiers jus, neutral lard, mutton jus, stearine, pressed tallow, hardened marine animal oils, etc. — (2) Including small amounts of vegetable and animal fats and oils. (Average 1921-25, 3,400; 1926-30, 1,300; 1931-35, 1,700 quintals). — (3) A part of the butter mixed with margarine is added in special factories. According to the figures given by the Central Butter Office of the Netherlands the total amount of butter added to margarine was 159,000 quintals in 1933, 130,000 in 1934, 88,000 in 1935 and 46,000 quintals in 1936.

tax on compounds and food oils was increased on 22 September 1935 from 24 to 30 cents per pound and the tax on the import of food oils, excluding olive oil, was increased to 40 cents per kilogramme. But as can be seen from table XXI this increase proved to be insufficient. The use of other oils and fats and also the production of margarine in the home further increased. Therefore on 2 July 1936 the taxes on other food fats and food oils were increased to 40 cents per kilogramme.

With the available data it is only possible to analyse the kinds of raw materials used in the margarine industry of the Netherlands under the heads of animal and vegetable materials. (See table XXII). Further the use of raw materials composed of fish- and whale-oils and fats is not separately shown but included with other animal fats.

Other countries. — The regulation of margarine production in **Czechoslovakia** by the Government Law of 12 March 1934 was discussed in the previous article. The production of margarine was limited at first to 520,000 quintals in 1935, later however a further quota of 75,000 was allowed and the total production in 1935 was 603,000 against 698,000 quintals in 1934. For 1936 a quota of 650,000 quintals was established, and 30 per cent. of this must be supplied as People's Margarine at a fixed price and 40 per cent. produced within certain price limits. In the third quarter of 1936 this quota was raised.

One aim of the Law of 12 March 1934 was to increase the use of home-produced raw materials in the margarine industry. Thus, in 1935 the margarine industry was obliged to use 143,000 quintals of home-produced rape-seed oil and 600, quintals home-produced soybean oil, at a fixed price. A similar provision was made for 1936 and 1937. According to the Law of 23 June 1936 a special tax has to be paid after 7 July 1936 on the production and the import of artificial fats and oils which compete with animal fats. This was fixed at 70 kronen per quintal for food oil, at 60 kronen for margarine and similar fats, and at 30 kronen for raw materials of the margarine industry.

The importance of margarine in the fats supply of Czechoslovakia at the present day can be seen from the fact that at the time of the reduction of output in 1935 the consumption of margarine and artificial fats was 4.3 kilogrammes per head of population while butter consumption in the same period was 6.7 kilogrammes per head.

Margarine consumption in **Sweden** has been checked since 1933 by a tax which at the end of September 1936 was 30 öre per kilogramme. Production increased again after 1932 and was in 1935 558,700 quintals against 497,000 in 1931 and against the earlier maximum of 552,400 quintals in 1929.

In **Norway** even after 1934 use was made of the powers granted by the law of 24 May 1931 to fix a quota of butter to be mixed with margarine. The quota was so fixed as to make it possible to absorb the surplus butter production in the margarine industry. The size of the quota therefore fluctuated very considerably. It was highest in the summer of 1935 when between 17 April and 13 June it was 17 per cent.; it was then reduced until it was five per cent. between 14 October 1935 to 20 January 1936, and subsequently increased again to 13

per cent. and finally to 17 per cent. After falling to 9 per cent. it was again increased on 1 February 1937 to 17 per cent.

The tax on margarine introduced by the law of 29 June 1934 amounted to 20 øre per kilogramme when the butter mixing quota was 5 per cent. For every one per cent. increase in the amount of butter to be mixed over 5 per cent. the tax was to be reduced by one øre. By the law of 21 June 1935 the tax was fixed at 10 øre per kilogramme when the butter quota was 10 per cent. with a provision that it should be one øre greater or less according as the butter quota decreased or increased.

The output of margarine in Norway after the introduction of the law on butter mixing and special margarine taxes continuously increased. In 1936 it was 553,000 quintals.

TABLE XXIII. — *Fats and Oils Used in the Margarine Industry in Norway*
(In quintals).

	1916	1927	1919	1931	1933	1935
Oleo stock and oleo oil . . .	111,320	44,230	26,380	22,060	15,970	8,140
Neutral lard	22,710	5,690	3,720	2,510	1,100	110
Oil from cotton seed, sunflower, groundnuts, and other seeds	166,860	94,100	97,580	101,190	82,930	76,780
Palm-kernel fat, palm fat and coconut oil	—	173,400	202,660	188,820	198,770	195,780
Hardened whale oil	—	42,830	62,870	78,370	90,150	110,180
Other hardened oils	—	—	—	—	—	7,030
Natural butter	2,670	4,780	3,780	4,180	30,500	49,040

Source: Norges Industrier, Produktionsstatistik.

In **Russia** manufacture of margarine was begun in 1930. With the enlarging and modernising of the oil industry, above all of the refining and hardening plants, production increased considerably. In 1931 also production of compounds was begun, and in 1934 this production exceeded that of margarine. Margarine output in 1934 was 328,000 quintals and that of other artificial food fats 360,000 quintals.

The output of margarine in **Belgium** after falling in 1932 again increased in the following years. In 1935 came various measures inimical to the margarine industry and in 1937 a production quota was established. Production in 1935 was 458,000 quintals against 282,000 in 1932, and 493,000 quintals in 1929.

In **Finland** output increased further in 1933 in spite of a tax on margarine. This tax at first, on 29 December 1934, was 2 Finmarks per kilogramme. In April 1935 it was raised to 3 Finmarks but then on 22 October 1935 it was reduced to 1 Finmark on account of the change in market conditions. The output of margarine was in 1934 82,600 quintals against 100,300 in 1929.

Also in **Japan** production of margarine was started. The output tended to increase but is even so less than the output of butter. In 1934 output was 16,300 quintals while at the same time butter output was estimated to be 25,000 quintals.

On the development of margarine production in **other countries** (France, Austria, Switzerland, Hungary, Poland, and Italy) there are no reliable data. Production in all these countries taken together is however small; in 1935 it was estimated at 100,000 quintals. How true this figure is it is impossible to say here.

H. BÖKER.

SURVEY OF THE RECENT AND PRESENT POSITION OF AGRICULTURE IN PORTUGAL

SUMMARY: Regions and crops. — Estimates and views on Portuguese agriculture before the war. — Agriculture after the war. — Cereal growing. — Vine growing. — Potential agricultural capacity of Portugal. — Present position of agriculture. — Land improvement by irrigation, etc.: schemes and achievements.

Regions and Crops.

The Portuguese Republic, which occupies one seventh part of the Iberian peninsula, with an area of 8,910,640 hectares, has an area of some 6,500,000 hectares under cultivation.

It is a country of increasing population, by reason of the high birth-rate, which in the decade 1919-29 was 38.8 per thousand inhabitants, and in spite of the high mortality, which for the same period was reckoned at 20.8 per thousand. The density of population is 71 persons to the square kilometre; the maximum density occurs in the North, where the average is as high as 91 and the minimum in the South, where it is only 30.

All these figures indicating the relative density of the population are correlated with the distribution of property and the intensity of cultivation; in fact, it is in the North that property is most subdivided and intensive cropping prevails while in the South there is a prevalence of latifundia and extensive cultivation.

Portugal appears to be naturally divided into the following regions: the two which form the area historically known by the designation "Entre Douro e Minho", a region of intensive cultivation where maize growing is predominant; and the Traz-os-Montes region where stock farming predominates and where the growing of cereals is combined with that of potatoes; the region of the basin of the Douro, famous for its vine yards; that of Beira (Upper, Lower, Littoral and Transmontane) which includes all the basin of the Mondego and part of the upper course of the Tagus; this is a zone of highly developed and flourishing agriculture and is densely populated; the Estremadura region which occupies the greater part of the basin of the Tagus and the Lisbon peninsula, a zone

of vine and cereal cultivation as well as of stock farming; the region of Alemtejo; and lastly of Algarve, in the extreme south, a mountainous zone, specially adapted to the cultivation of olives and fruits, mainly citrus fruits.

This last region is one of typically Mediterranean agriculture. Atlantic climate prevails and rain is violent and irregular. Owing to the variations ranging from the very wet climate of the North, where the minimum rainfall is calculated at 800 mm., to that of Alemtejo and Algarve, where it scarcely reaches 350 mm., the river system is also of irregular character, the streams being almost all of torrential type, useful for manufacturing purposes but difficult to employ for irrigation.

Some 60 per cent. of the population of Portugal are engaged in agriculture, but in spite of this and of the fact that the chief economic resources of the Republic are derived from the soil, agriculture is not highly developed. The explanation of this backwardness lies in various adverse factors: the irregularity of the rainfall, the nature of the land available, the inadequate and antiquated implements, etc., employed traditionally by the farmers and, above all, the unequal distribution of property over the greater part of the national territory.

The distribution of the cultivated areas and its percentages in respect to the whole area under cultivation have been approximately calculated as follows (1):

	Square kilometres	Percentage
Maize	3,762	4.2
Wheat	5,918	6.6
Rye	1,480	1.6
Oats	1,655	2.0
Barley	777	0.8
Rice	113	0.1
Vines	3,500	3.8
Olives	3,500	3.8
Fruits	1,300	1.4
Other crops	900	1.0
Fallow lands	13,400	15.1
Woods and forests	23,350	26.3
Land not in cultivation	29,028	33.3

Portugal is an agricultural country par excellence and not only its permanent resources but also the key to its internal stability and independence are to be found in agriculture. The heavy weight of the country's financial commitments abroad can be relieved only by means of the increase of agricultural production, directed by preference towards the crops and types of farming for which Portugal is best fitted naturally.

(1) Only in the figures of this table the peninsular territory and the territory of the Azores and Madeira are combined.

Among Portugal's main sources of wealth is her fishing industry which is fairly well developed and flourishing, owing to its excellent position in respect to the international markets, especially the British. Then there are certain kinds of cultivation which, although formerly yielding scarcely enough for internal requirements, are capable of increase and improvement. The principal among these are cereal cultivation and vinegrowing.

Portuguese Agriculture before the war.

(1) *Cereal cultivation.* — It is not easy to state with absolute precision the extent of the area effectively devoted to wheat-growing in Portugal.

Up to the period of the war and during the war, statistics were not exact and it is only possible to state by way of estimate that the area devoted to cereal-growing was somewhere between 350,000 and 450,000 hectares and that the production varied from a minimum of approximately 2,300,000 hectolitres in 1915-16 to a maximum of 4,100,000 hectolitres for the season 1910-11; the average yield was about 5.7 hectolitres per hectare cultivated.

The prevailing cereal in the South of Portugal is wheat; in the North of the country, as in the neighbouring Spanish region of Galicia and in Asturias, it is maize.

Wheat is grown on thinly populated lands where the holdings are as a rule little split up and the cultivation is usually of the extensive type. On the contrary maize is typical of the densely populated regions, where holdings are much split up and cultivation intensive.

Maize is of first importance in the food supply of the Portuguese peasant and workman, especially because of its cheapness; in addition, it is much used as a fattening feed for animals, and on account of its cheapness forms an advantageous substitute for other supplementary feeds for the farm animals, especially for pigs, being fed either in grain or as meal; maize stalks form an excellent feed for sheep, so much so that in some parts it is the usual feed for this class of stock. For maize, as for wheat, however, Portugal continues to depend on imports from abroad and this to the extent of a fifth part of the total national production.

It will be shown later that, thanks to the agricultural policy of the last few years, this deficit in production is being made good and it is hoped that it will almost completely disappear when the whole irrigation scheme planned by the Government is in full working order.

On the other hand, whereas for wheat there is a certain sustained increase alike in the area and in the yield, for maize there was noted in the pre-war years a progressive decrease both in the area under cultivation and in the production.

In 1905, for example, the production of maize was equal to and even exceeded that of wheat, and in spite of the protection enjoyed by wheat to the disadvantage of maize, the latter cereal was grown on an area of over 400,000 hectares and represented an average harvest of more than 5,000,000 quintals; subsequently however the area cultivated in maize was systematic-

ally reduced till in 1915 it was rather over 200,000 hectares with a total production of 3,500,000 quintals.

This decrease—explained by some as due to the increase in the consumption of wheat flours for bread making and to the substitution of green fodder for the feeds of which maize bran forms the basis—had a serious effect on the economy of the Northern regions, in the agriculture of which maize was a predominant factor and difficult to replace. Strictly speaking however there must have been other causes for this decrease, seeing that, in those same years, although there was a certain shrinkage in internal consumption, it remained so much in excess of the volume of national production as to make it essential to increase imports, thus rendering more unfavourable than before the balance of external trade.

Fortunately this tendency to reduce maize cultivation was vigorously combatted and gradually checked and even an increase in production secured.

Rye, the characteristic cereal of the regions of harsh and variable climate, of hilly country and poor soil and of large undivided holdings, has followed the same fortunes as maize, that is to say, its cultivation diminished from the beginning of the century till the European war. From various sources figures are obtained showing the area devoted to rye in Portugal in 1902 to have been 300,000 ha. and the production about 2,800,000 quintals; while in the years immediately before the war, the area cultivated did not attain 200,000 hectares and the production was not more than 1,000,000 quintals.

Later it will appear that, although areas under rye have not increased, tending perhaps to decrease, the productivity has improved up to nearly 9 quintals per hectare, thereby ensuring sufficient harvests for the national requirements.

It is clear that an increase could be effected in the growing of rye which is frequently the only crop that succeeds on certain poor soils of Portugal; it forms also an excellent additional feed for live-stock.

Formerly barley was grown on a larger scale than oats; in the first years of the century the reverse began to be observed, and whereas there was a shrinkage in the areas under barley, that under oats was seen to be expanding for the whole country and this went on until the years immediately before the war. Thus in 1916, as compared with a production of 1,158,794 hectolitres of oats, the barley crop scarcely reached 421,289 hectolitres; this change is to be explained, among other reasons, by the fact that it costs less to grow oats. However this low figure touched in the period immediately before the war may be said to be the lowest for barley, the national consumption of which was even then greater than production; and the uses of barley (including the brewing industry, still in its infancy) make it possible that there will be an increase in sowings of this cereal.

The cultivation of rice in Portugal was at no time sufficient for consumption requirements, although for a long time past anxiety has been displayed by the agricultural authorities for the intensification of rice-growing, which is to some extent connected with the problems and possibilities of irrigation, etc.

In 1916 the rice harvest yielded some 200,000 quintals of rice, or about fifty per cent. of the national consumption.

In concluding these remarks on Portuguese cereal cultivation as carried on before the planned efforts for the reconstruction of agriculture and agricultural economy undertaken about ten years ago and intensified in these last five years, it may be stated that cereal production in the period immediately before the war represented some 642,000 metric tons, while imports amounted to about 150,000 tons of cereals.

(2) *Vine-growing and Wine-making.* — The leading agricultural production of Portugal is vine-growing. It is the one that employs most labour and the largest capital, and it contributes to the balance of payments the proceeds of a constant and assured export.

In Portugal the natural conditions are the best possible for vineyards, and the production is not affected, as that of cereals, by the weather conditions, which occasion serious fluctuations in the cereal harvests from one year to another.

From this immunity of the production and its relatively satisfactory economic conditions the national economy, and especially in its social aspect, has always benefited.

The basins of the Douro and of the Tagus are the best areas for vine-growing; nearly all the exportable wines are produced in one of these areas, both wines for blending and fine quality wines.

At the beginning of the century, the cadastral services calculated the lands devoted to vine-growing as 313,165 hectares, or 4.5 per cent. of the productive area, a percentage only surpassed by Italy among the other producing countries.

The districts in which vineyards occupy the largest area were in 1920, and continue to be at present with slight variations, as follows: Lisbon, Braga, Vizeu, Santarem, Oporto, Leiria, Villa Real, Guarda, Vianna do Castelo and Faro. In relation to the total area of the respective district, the order is as follows: Braga with 19.2 per cent., Lisbon with 12.64 per cent., Vianna do Castelo with 14.78 per cent., Oporto with 14.15 per cent. and Villa Real with 12.33 per cent.

In regard to vine-growing, Portugal might be divided into 12 agricultural regions. Some of these regions are officially delimited for the effective protection and defence of the typical wines, as for example that of the Douro, whence originates the wine which is universally renowned under the name of "port", together with the excellent table wines known by the appellation of "virgin wines of the Douro".

The most productive is the region of Bacia and of the Tagus basin, where the extensive plantations of vines attain and sometimes exceed a million stocks and the productivity attains levels unsurpassed in any other part.

In concluding this examination of Portuguese agricultural production in the period before the great reforms of agriculture and agricultural economy were initiated, this production may be estimated at a value of about 250,000 contos, or 250,000,000 milreis; of which total, 35 per cent. represented the earnings of labour.

This review, although not more than superficial, of the national economy and the agricultural situation is enough to give an idea that the rural economy is at present very far from meeting all the requirements of the country in basic foodstuffs; an adverse balance of trade in respect of cereals and livestock is offset mainly by the wine output.

Potential Agricultural Capacity of Portugal.

From all we know of Portuguese agriculture we can conclude that there is a vast area of uncultivated land in Portugal, that the working of the lands is seldom intensive, that knowledge of agricultural science is scarce, and that the exploitation of the hydraulic resources of the country is unsatisfactory. A recognition of these conditions leads to the conviction that the actual effective production is very far below the productive capacity; whereas the potential capacity of the Portuguese soil is very high. Of the 8,910,640 hectares which represent the mainland area 8,500,000 hectares are cultivable, the remaining 410,640 constituting the area built over, used for roads, etc., and that part which is not capable of cultivation. At the present time the area in production is about 6,100,000 hectares. Thus, if the area capable of cultivation and production is estimated at 8,500,000 hectares, Portugal may count on an additional 2,300,000-2,400,000 hectares to be farmed, that is to say, the productive area may be expanded by one third and the national zone of cultivation may finally represent 95.40 per cent. of the total area of the country.

An all important question connected with that of the extension of the cultivated area, with that of the intensive cultivation urged for certain products, as, for example, the cereals and, first and foremost, wheat, and with the increase of certain types of production still little developed and of excellent possibilities (such as olive, certain fruits, vegetables, forage crops, etc.), is that of the expansion of irrigated lands; and in its turn this question, long discussed in Portugal and only now in the way of gradual realisation, is intimately related to the problem of irrigation waters, the basis, together with the campaign for wheat growing and that for the protection of vine growing of the agricultural policy of the Portuguese Government.

In the first serious studies made in regard to the general schemes for the transformation of agriculture by means of irrigation, it was calculated that the area which could be devoted to irrigated crops and capable of being irrigated, was 2,300,000 hectares, or 25 per cent., of the total area; of this total, at the present time, only 870,000 hectares are under irrigated crops.

On the other hand there was a general conviction among those concerned that the Portuguese agricultural problem was above all a problem of irrigation.

Considering that, by the first stage of the works required, there could be converted into irrigated land 200,000 hectares of dry land, the champions of the irrigation schemes claimed that there would be an increase of 3,000,000 milreis on a single harvest of average type.

The fact that the prosperity of Portugal is, owing to the nature of the country, intimately associated with the agricultural industry is not to be inter-

puted in the sense that the other industries are not to reach the maximum of their prosperity. The need for co-ordination derives from the importance for the economic development of Portugal of the use of hydraulic motive power which can distribute electric energy to various points of the country, and so compensate in part for the want of coal and facilitate industrial and commercial progress by the production of light, heat and motive power. By benefiting industry and transport this would tend to further the development of agriculture, not only through the replacement of animal traction by machinery but also through the encouraging of irrigation which, mainly in the South of Portugal, represents the only remedy for combatting the great enemy with which agriculture in that region has to contend, *viz.*, drought. In accordance with the new policy of reconstruction, financial assistance is to be given by the State for the achievement of these objects, since the expenditure which this work represents, heavy as it is, none the less will in the end increase the national wealth and the national income.

Present Position of Agriculture.

With a view to estimating with the help of numerical data the endeavours made by the rural classes to second the official policy through the new corporative bodies which organise Portuguese agriculture and which co-ordinate from the standpoint of the common national interest the general and special initiatives and schemes, a brief survey will now be attempted of the present state of agricultural production, limited to those products already considered above.

The significant data will afford also some idea of the effect on Portuguese international trade of the State protectionist policy and agricultural policy in general, which aim at rendering the nation independent in respect of raw materials and at adjusting the balance of trade, by cutting out certain items of imports which can be replaced by the increase of national production.

According to the figures of the "International Year-book of Agricultural Statistics" of this Institute, for 1934-35, the area devoted to wheat in Portugal was 543,956 hectares as compared with the 437,688 which represent the average for the period 1926-30; the production was 6,719,650 quintals as compared with the average of 2,840,434 quintals; the yield per hectare rose from 6.5 quintals in 1926-30 to 12.4 in 1934-35. As might be expected the imports showed a corresponding decline over the same period, *viz.*, from 1,943,045 quintals (including wheat flour) to 255,188 quintals.

This increase in wheat production came to be regarded as excessive being due to the exceptional continuance of the optimum conditions and accordingly of seasons of maximum production. In November 1934 the Government already recognised the necessity of imposing a check on the advance in order to prevent the increase of the stocks which, on the completion of the 1935 harvest, were found to total 1,230,000 quintals. With a view to the removal of the difficulties resulting from this state of affairs, the Decree of 12 August 1935 was enacted which rendered compulsory the declar-

ation of harvests, placed the trade in wheat in the hands of the National Federation of Wheat Growers and at the same time made provision for the issue of warrants to farmers with excessive production, up to 70 per cent. of the value of their crop.

On the other hand, the State and the corporative organisations are endeavouring to restrict imports which in the years 1932 to 1935 tended to exceed the requirements of the internal market, and although the promotion of a regular wheat export is in no way part of the policy, temporary measures are being taken to encourage exports so as to balance excessive imports.

In regard to maize the figures are also significant, but in another sense, as will be seen. In fact, in the four-year period 1926-27 to 1929-30, the average area devoted to the cultivation of maize was 348,450 hectares and the production 3,727,000 quintals; in 1934-35 the maize area increased to 425,860 hectares and the production fell to 3,042,980 quintals, the average yield, which in the earlier period had been 10.7 quintals per hectare, fell in 1934-35 to 7.1 per hectare. The external trade followed a parallel course, with the export almost nil and with an import varying from 639,168 to 751,180 quintals.

Some allusion has previously been made to this phenomenon of decline in maize production and it may be stated that the increase in wheat production and the consequent larger consumption of wheat flour are to some extent due to the advantageous price of wheat; on the other hand, the very fact of the neglect into which the intensive cultivation of maize has fallen explains (apart from other more complex reasons of a technical nature) the decline in productivity. In any case, it appears that the associations of maize growers are making efforts to remedy the deficit in production, especially after measures were taken to limit the production of wheat which rivals maize as one of the most widely cultivated crops.

In regard to oats, the areas under this crop show no increase from 1930 to the present time, but there has been increase in productivity, the yield having risen from 4.6 quintals per hectare to 6.9 with consequent increase in production from an average of 832,945 quintals to 1,116,310 in 1934-35; this figure however is not to be considered as normal, since it is greatly in excess of the production of any previous year. In the 1933-34 season the production was, on the contrary, exceptionally scanty, being the lowest for the whole of the past two decades: *viz.*, 527,772 quintals with a yield of barely 3.2 quintals per hectare. In any case, the production of oats does not, from the economic standpoint, represent a problem, as there is a certain stable, or at least easily secured, equilibrium between production, consumption and trade.

The area under barley is becoming restricted, but not the consumption, as a branch of which the brewing industry is beginning to gain importance. This industry was hitherto almost non-existent in Portugal, possibly on account of the protection accorded to the wine-making industry. The averages in respect of barley growing for 1926-30 were 70,824 hectares and 401,612 quintals with a yield of 5.7 quintals; the corresponding figures in 1934-35 were: 50,190 hectares, 440,739 quintals and a yield of 8.8 quintals per hectare. This last however was not a sufficiently high yield, as it rendered necessary an import

of nearly 14,000 quintals, a quantity which possibly will be exceeded in subsequent years owing to the increase in consumption due to the growing importance of the brewing industry.

The production of rye, like that of oats, is properly balanced and kept within the due limits of the present internal requirements; the area cultivated has decreased in comparison with the average of the last five year period and the yield has increased from 6.7 to 8.9 quintals per hectare, resulting in an advance in production from 1,109,688 to 1,247,910 quintals, while the area declined from 164,642 to 140,755 hectares. The import and export figures for rye are so small as not to call for mention.

As in the case of wheat, there is excess of production from vine-growing and a serious fall in values. The area under vineyards has undergone but little variation from 1929 to the present time, but the production of table grapes increased from the average of 10,818,636 quintals for the period 1926-30 to 13,031,000 quintals in 1934-35. That of wine grapes increased from an average of 6,047,038 to 10,804,713 quintals. Export of table grapes rose from 37,943 to 54,232 quintals, but on the other hand the export of wine, which in 1926-30 was 1,000,000 hectolitres, declined and finally was hardly more than 700,000.

The foundation of the corporative organisations—Federation of the Vine-growers of the Centre and South of Portugal, Guild of the Merchant Exporters of Wine, Corporation of the Growers and Exporters of the Oporto wines, and the Syndical Federation of the Vine-growers of the Douro Region—has served to bring about the practical regulation both of wine production and also of its internal and international trade.

One of the measures taken was the destruction of the inferior wines, either with compensation to those affected by the loss, or regarding the quantities destroyed as the producer's corporative contribution. The elimination of the wines made from grapes produced from grafted hybrid stocks was calculated as affecting 100,000 casks of 600 litres in all and the surplus was estimated at 200,000 casks.

However, the scanty vintage of 1935, the quotas imposed for the importation of Portuguese wine into certain countries (in particular, into France), and the measures taken by the Government and by the corporative organisations, have relieved the situation of the existing stocks, but have not checked the progressive decline of prices.

Among the legislative provisions of interest is that of 28 January 1935 which prohibits the planting of new vineyards, although actually this has not strictly applied as have been the other measures relating to vine cultivation and to trade in wine and to its utilisation for the obtaining of by-products.

The greatest joint effort made by the vine growers, has been made in the region of the Douro, where the organisations have effectively controlled production and protected the pure genuine product and international trade in it. The central body, the previously mentioned Syndical Federation of the Vine-growers of the Douro Region (commonly known as " Casa do Douro ") was declared to be a

corporative organisation, by the Law of 10 January 1935. To give an idea of the importance of this organisation, which carries out the provisions of the law, some figures, are subjoined which clearly show the activity of this organisation. Up to 1934 the "Casa do Douro" had granted warrants to the extent of 12,600,000 escudos on port wine. For the purchase of ordinary table wines of the vintages 1932 and 1933, the same body expended 33,512,000, escudos and distributed the brandies produced by distillation of these wines (10,230 casks) among the farmers with a view to utilisation in the manufacture of their wines. More than 20,000 vine growers have been assisted by the technical services of the Federation in other types of activity. In 1935 the Casa do Douro limited the manufacture of port wine to 70,000 casks; this limitation was dictated by the excess of stocks and the desire to avoid congestion of markets and lowering of prices.

Land Improvement by Irrigation.

The irrigation of the various regions presents a more serious problem from the economic and social aspect than on the technical side since, if on the one hand it involves the preliminary study of the actual and possible physical features, rainfall, and irrigation facilities, of these regions, it demands on the other a close acquaintance with the population, production, internal and external trade and transport, and the social and political organizations; in short, a knowledge of the so-called human geography of these regions.

Seeing that all financial operations connected with land settlement or repopulation are long term investments bearing a low rate of interest, they are very seldom suitable for private investors, either as regards the amount required or the duration of the loan, which can hardly be expected to mature during the lifetime of the investor. Such operations, therefore, are of interest only to the State, since the State is benefited by the increased value resulting from land improvement in public and private property (at least four times its original value) and in production; by the development of trade and the increased volume of business and the consequent increase in the public revenues in respect of taxation, etc.; by the establishment of new industries strictly dependent on agriculture; and by the consequent increase in the population. Finally, for a country like Portugal, which still owns the fourth largest colonial empire in the world, the most important advantage is the excellent example set by such undertakings and the experience gained from them, which can be turned to account in the overseas possessions (1).

For the above reasons, both general and particular, the Portuguese Government established on 8 September 1930 the "Autonomous Committee for Agricultural Irrigation Works", which was dependent on the Ministry of Public Works and Communications and was entrusted with the duty of carrying

(1) See: RELATORIO 1935. ESTUDOS, PROYECTOS, E CONSTRUCCION. Committee for Agricultural Irrigation Works. Portuguese Republic, Ministry of Public Works and Communications, Lisbon 1936.

out the policy of the Government in respect of irrigation. This Committee was reorganised a year later in accordance with a Decree, and subsequently modified by successive measures until it assumed its final form as established by the measure of 16 February 1935.

On 28 February 1930, authority was given for the issue of a loan of 100,000 *contos* (1) for use during the first ten years of the plan (1931-1941).

The first general scheme drawn up by the Committee was vague, fragmentary and extremely costly; hence Ministerial measures were introduced in January 1935, providing for the preparation of a concrete plan calculated to ensure speedy returns, so that its practical and economic result should act as a stimulus in this first phase of agricultural irrigation in Portugal.

A general map was therefore prepared showing the possibilities of irrigation over a total area of 400,000 hectares, together with a definite scheme of the irrigation financially possible, covering an area of 168,505 hectares. From the second area some 80,000 hectares were selected for immediate operations, and grouped into 16 sections, at a total expenditure estimated at 500,000 *contos*. The preliminary studies, the organisation of the plans and the works to be undertaken in each of these 16 sections constituted the plan of 1935, which was to be carried out within the seven-year period 1935-41.

In order to give an idea of the rate at which the studies and the works proceed the total expenditure up to the end of 1935 is given below.

Up to the end of 1934, for studies, plans, machinery, build- ings, etc.	21,456,923.66
During 1935 studies and plans	5,608,459.69
buildings, etc.	4,862,434.76
General total to end of 1935 . . .	<u>31,927,818.11</u>

Apart from rice, the cultivation of which has already been increased from an average area in 1926-30 of 13,054 hectares to 22,892 in 1934-35, with a corresponding increase in production from 213,866 to 547,461 quintals, the crops which it will be possible to grow on the irrigated zones according to the 1935 plan, are the following:

Pasture and fodder crops	28 %	23,240 hectares.
Fruit-trees	20 %	16,000 »
Products at present imported	52 %	43,160 »

By increasing the production of fodder, it would be possible to develop stockbreeding, which is by no means satisfactory at present. State assistance, particularly financial assistance is necessary for fruit-growing as fruit-trees are not immediately productive.

(1) The *conto* is equal to 1,000 milreis.

The possibilities of irrigation in Portugal are given below:

Zones to be improved	Area for irrigation (hectares)
Velga de Chaves	2,000
Campos de Vilariça	700
Vale do Vouga	25,000
Campos de Burgães	185
Vale do Mondego	30,000
Campos do Liz	1,000
Campos do Alcôa e Rio de Areia	500
Vale de Sizandro	500
Campina de Idanha	6,000
Vale do Tejo	35,000
Vale do Sorraia	30,000
Campos de Magos	700
Campos de Muge	2,700
Campos de Loures	700
Campos de Marateca	700
Campos de S. Martinho	500
Vale do Sado (Lower course)	6,000
Vale do Sado (Upper course)	3,500
Campos de Xarrama	1,000
Campos da Ribeira de Odivelas	1,000
Campos de Alfundão	500
Campos do Roxo	1,500
Campos de Vila Nova de Mil Fontes	3,000
Campos de Tavira	2,500
Campina de Faro	900
Campina de Silves e Portimão	2,000
Areas not specified	10,000
Total	168,565

The 168,565 hectares referred to above comprise the area which it is financially possible to irrigate in the near future, out of the total area of 400,000 hectares which should be irrigated. The area of 80,622 hectares for which irrigation is considered urgently necessary is divided into the following zones:

Veiga de Chaves	2,000
Vale da Vilariça	700
Burgães	181
Campos do Mondego	15,000
Campina da Idanha	6,000
Paúl da Cela	441
Campos de Alvega	500
Campos do Ribatejo	12,700
Campos de Magos	700
Vale do Sorraia	30,000
Campos de Loures	700
Vale do Sado (Lower course)	6,000
Vale do Sado (Upper course)	3,500
Campina de Silves e Portimão	1,500
Campina de Faro	700
Total	80,622

It is calculated that the total irrigable area of Portugal will, when the necessary works have been carried out, support a population of one and a half million more than the present number.

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(1) Previous list June 1937. To be continued December 1937.

(2) List of abbreviations: bihebdom. (biweekly); bimens. (twice monthly); bimestr. (every two months); déc. (every ten days); étr. (foreign price); f. (copy); hebdom. (weekly); int. (home price); irr. (irregular); mens. (monthly); n^o (number); N. S. (new series); p. a. (per annum); q. (daily); sem. (half yearly); s. (series); trihebdom. (every three weeks); v. (volume); trim. (quarterly).

(3) Between brackets [/] are given translations and explanatory notes not appearing in the title of the review.

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No. 10

CROP FINANCE

SUMMARY: I. *General considerations.* The consequences of the crisis in agriculture aggravated by the lack of organisation by farmers in respect of the sale of their products. Necessity for working capital to allow farmers to cover their working costs during the whole production period and to avoid the necessity for a quick sale of their products immediately after the harvest. General lack or insufficiency of such capital. Subsequent requirements for crop finance. Definition of crop finance. Its function in steadying the market. Interest particularly of the large numbers of small producers in such financing. Legal regulation concerning loans against pledge made under the latest laws. System of guarantees under laws in France, Italy and England. — II. *Situation in certain countries.* Argentina. France. Italy. Poland. Other countries (Greece, Romania, Uruguay, and Columbia).

I. — General Considerations.

Although it had almost everywhere the same essential causes, the agricultural crisis had different characteristics and repercussions in the various countries according to the extent of the technical, economic, and commercial organisation of agriculture and its financial resistance. It is not necessary to study here, although it would be very interesting, the way in which the various agricultural economies met the difficulties created by the crisis, the systems and means adopted, and the results obtained. However, it is generally agreed that the crisis would have had in certain countries less disastrous results if, among other things, farmers had been better prepared and the sale of their products better organised. In fact, while associations concerned with production and technical matters have grown and continue to grow appreciably in importance, this cannot be said of associations concerned with the handling, marketing, and prices of products, the sale of which is still effected by elementary methods. This appears all the more important if it is borne in mind that the large majority of farmers are small producers generally without experience in and means for trade and, as a result, are easy prey to speculative intermediaries.

The bad organisation of the sale of products has, without doubt, disastrous consequences for the producer and certainly represents a social loss (1). The unregulated supply of agricultural products, not responding to the needs of the

(1) Prof. CARLO DRAGONI: *Economia agraria*. Milano, Hoepli, 1932.

market and associated with a relatively inelastic demand, produces those violent fluctuations in prices which constitute one of the main disturbing factors in agriculture.

Farmers who have often to pay the rent for their farm and harvest expenses as soon as the crops are harvested are obliged to sell their products at a time when similar products, coming from a great number of other farmers who are in the same position, flood the market and inevitably produce the collapse of prices. The result is that sometimes the returns from the sale are not sufficient to cover the costs of production and the farmer after considerable labour finds himself finally obliged to incur a debt in order to provide for the maintenance of himself and his family.

In fact, the funds to finance crops should be provided by an adequate working capital because the farmer recovers the expenses involved in a year's production only at the moment when the production of a crop is finally completed, namely during the following year. Working capital for a farm should therefore cover the costs of production during two distinct phases.

The first phase corresponds to the period between the moment when expenses of production are first incurred and the harvest. The second corresponds to the period between the harvest and the sale of the crops.

The first phase depends only on the conditions under which crops are produced. Here there are many factors to be considered, the quality and fertility of the soil, the position of the farm, weather conditions, etc.

The second depends on one hand on the movement of market prices a rise in which induces the farmer to sell his products and a fall impels him to keep them off the market; it depends, on the other hand, on the reserves of working capital which make it possible for the farmer to spread the sales of his products fairly evenly over the whole year.

For given farming conditions there is an optimum period for this second phase. If working capital reserves are not available to the farmer over this period he is obliged to provide himself with funds by loans and this is the use of credits for crop finance (1).

These credits consist in an advance to the farmer of sums to replace for the time being those which he could obtain by the disposal of crops whose sale he is spreading over a period (2). Such credits are issued against promissory notes or warrants. The warrant is a note on security and is transferable by endorsement; it describes and gives the value of the goods backing the loan and gives to the lender a first class security. By the use of such a warrant the owner of goods being in temporary need of money can at once contract a loan of the necessary funds and so avoid selling the goods constituting the security; these

(1) For a study of the financing of an important world crop, *i. e.* cotton, see THE FINANCING OF THE GROWING AND MARKETING OF COTTON. *Monthly Bulletin of Agricultural Economics and Sociology*, January 1936. International Institute of Agriculture, Rome.

(2) LOUIS TARDY, Directeur général de la Caisse nationale de crédit agricole (Paris): Le financement des récoltes. Report presented at the Vth International Conference of Agricultural Credit, Vienna, 9-11 September 1936.

goods in fact remain in the possession of the borrower (1). Its legal character is that of a kind of mortgage against movable goods.

If this credit instrument were not available, the farmer in need of money would have to have recourse to one of three means: he can either sell his output at whatever price he can get, or he can borrow on a simple note of hand backed only by personal security which lenders generally consider insufficient; or finally, he can mortgage such real estate as he has the good fortune to possess incurring for an ordinary short term loan the heavy expenses of an attested acknowledgment of debt.

The need to make possible the disposal of agricultural products in a rational way and for remunerative prices, in other words to prevent by spread sales the flooding of the market, and to adjust supply and demand, has recently been more and more recognised.

Advances on crops have from their beginning had the object of preventing precipitate sales and so reducing the excessive supply at the most critical time of the year. In this way the falling of prices below the average or equilibril level is avoided and so the market is more quickly stabilised than it is by means of a slow absorption of surplus supply. Stabilisation is the more rapid the closer is the amount of the products against which credits are issued to the amount of the surplus supply.

Further, while being advantageous for producers these credits are not opposed to the interest of consumers. In their absence it generally happens that prices fall as a result of surplus supply even below the costs of production, and rise later. This while being disadvantageous for farmers favours the intermediaries who make a profit out of temporary disequilibrium, and does not benefit the consumers who, as experience has shown, have to pay for the same products retail prices proportioned not to the average wholesale prices during the period of disequilibrium but to the higher prices which later rule on the wholesale market.

As this condition has been characteristic during the post-war period of the trade in the principal agricultural products it must be recognised that advances to farmers have exercised a beneficial influence not only from the economic but also from the social point of view. They aim in fact at maintaining especially the class of small farmers (2), which is not able to dominate the market but which has to submit to it; this class is very numerous and in view of the considerable contributions which it makes to the total output of agricultural products should not be sacrificed.

It is for this reason that to the traditional agricultural credit system has been added the branch with which we are now concerned, and which has spread slowly but steadily since its fairly recent beginning. It concerns the most important agricultural products which are not subject to government price fixing or monopoly.

(1) J. CARRET: *Le nouveau régime des warrants agricoles*. Besançon, Jacques et Demontrond, 1936.

(2) LUIGI PAGANI: *Importanza delle anticipazioni sui prodotti agricoli*. Istituto Federale delle Casse di Risparmio delle Venezie. Venezia, 1936.

This form of advances against the security of products requires the solution of technical, financial, and legal problems. For its operation it is necessary first to provide storage, warehouses, refrigerators, and, in general, equipment required for the conservation of agricultural products; there must also be available the necessary funds for the current financing of crops; these resources can be of a fairly large amount, above all when, as is most often the case, the products concerned are most important not only in price but also in value. In such case the loan operations are beyond the ordinary resources of the banks and have serious repercussions on public finance. But public finance, on the other hand, cannot be disinterested in the commercial realisation of the crops on which frequently depends the welfare of the whole community. As an example may be cited the disastrous consequences in Brasil which would have resulted from the lack of a systematic policy in respect of coffee.

The predominant tendency of today is to defend the market of the principal agricultural products in which are interested not only those particularly concerned in the trade in these products, but also the community as a whole. In this respect a credit system aiming at steadying the supply and stabilising prices is of primary importance.

The legal aspect of the granting of loans against pledge as this operation has been developed in the most recent legislation, has a particular interest. It would be outside the limits of this present article to examine exhaustively this aspect of the question. We will point out only that agricultural credit laws have frequently departed from traditional legal principle according to which in order to give validity to a loan contract the possession of the goods given as security had to be transferred to the creditor, and instead created a loan system where the security remained with the borrower. In other words, it was recognised that the guarantee given by security against the loan should be made in such a manner as to avoid the dislocation of agricultural operations, a dislocation that inevitably was produced if agricultural implements or livestock or, in our case, agricultural products, were transferred to a public or private depository. Then there was introduced a special form of loan against movable goods which while creating charges against these goods to secure the financial transaction yet left them in the possession of and available for use by the farmer. There were however attached severe penalties to be applied if the goods given as securities were sold without the consent of the creditor.

But as regards this guarantee, systems vary according to the different legal traditions. The most developed example of bills backed by agricultural products is to be found in France. In that country as in Germany and a number of Latin American countries a system of agricultural loan has been adopted, which does not require the transfer of the possession of the goods given as security. Italy has introduced a system of preference rights, legal or conventional; Great Britain and Northern Ireland has preferred to adopt a system of a charge on goods, a charge either simple or floating.

In order that there shall be a valid charge on the security it is necessary however to replace the act of dispossession by a legal act giving to the security a defined form and avoiding the possibility of fraud and litigation. This

act consists in the registration of the giving of security in a special register called generally register of agricultural pledges and kept by the registrar of mortgages.

In Italy there have been since 1884 proposals to introduce into agricultural credit operations a system of security by a charge on implements and livestock and on products, without dispossession. The legislator has solved the problem in a manner favourable to the farmer by adjusting the system of preference rights; this system is established in two forms, one legal and the other conventional. Agricultural credit operations are by law guaranteed by a preference right which gives to the lender in respect of the goods backing the credit (the products of the land in the case of a loan raised for the purposes of production, cattle or instruments in the case of a loan raised to buy these) a prior claim over any other creditor. A decree law in 1928 introduced a modification to the original decree of 1927 and made this system less strictly that of an impersonal goods security in respect of crops; according to the 1927 decree, in the case of a bad harvest, credits could be carried over into the following seasons even if the owner of the farm had changed in the meantime; according to the new decree, on the other hand, the carrying-over of the charge to the crops of the second year is admitted only when the land is cultivated by the person who obtained the loan. The conventional charge is an accessory form of security by which the farmer can reinforce the legal charge. If the loan is granted to permit the cultivation of the land, and is consequently guaranteed by a legal charge on the products, the farmer can in order better to guarantee the loan contract a charge also on his cattle. The contract charge is, in short, an agricultural pledge which does not give possession to the lender and is regulated as such. It has in fact to be made by a written document which should be duly registered on a special register held by the registrar of mortgages.

Another interesting case of the legal regulation of advances against security is provided by the English law of 3 August 1928. This law allows the security of goods in the form of a fixed or floating charge in the case of farm credit operations. This kind of guarantee was previously unknown to English law concerning agricultural products. According to these laws the farmer could offer to credit institutions from which he asked for loans only personal security or a charge on real property in the case that he himself was the owner of the land. According to the new law, on the other hand, the farmer is entitled to offer also a charge on the products and equipment of his farm and this charge is made without the goods constituting the security being removed from the farm to which they belong. The security follows the type of the English property charge in the form of either a floating or a fixed charge; in the first case the charge is on one or more given objects belonging to the farm concerned; in the second case the charge is general on all the objects or on one or more categories of goods belonging to the farm; in the first case the charge is direct and the creditor can consequently demand that all the money banked by the debtor shall be reserved to the repayment of the credit; in the second case the charge is general but can however be converted to a fixed charge in certain given circumstances, for example in the case of the bankruptcy of the farmer. The result in any case is the same obligation for the debtor which derives from

a fixed charge and which directs all the money that he may realise by means of the disposal of the goods on which the charge is made, to the extinction of the debts. All these charges have to be registered and the law provides a heavy penalty for the farmer who removes goods backing such a charge.

We have given considerable attention to the system of security against agricultural loans because this point is obviously very important for the development of crop finance.

We shall now describe the operation of this form of credit in certain countries (1); this will allow us to discuss certain interesting details and will complete the description of the system and give it a more concrete form.

II. — Situation in Certain Countries.

Argentina.

Loans against agricultural pledge have developed considerably in Argentina since the first year of the operation of the law of 19 October 1914 (No. 9,644) which instituted this form of credit. In a report presented to the Congress of the Republic of Argentina (2) the Minister for Agriculture points out that the remarkable development of agricultural loans secured by a charge on movable property has been considerably affected by the conditions and development of modern life.

In the past the Argentine farmer, if he were not a large owner and cattle farmer, only exceptionally concerned with arable farming, was a small owner without large means, using elementary methods, and content with producing a small output sufficient for his own supplies and requirements. At the present time, on the contrary, the farmer no longer farms to meet his own requirements but supplies the needs of people living in distant lands and having a wide variety of wants. That is to say from this point of view agriculture has become a business like any other and as such has need of appropriate credit to allow it to be carried on effectively and on a sound basis. Agricultural implements and machines have increased and have always to be replaced and perfected, seeds have to be selected and substituted for others according to technical advice and in accordance with world demand, more labour is employed and wages have risen and cultivation has become more intensive.

The inevitable consequence was the specialisation of each farmer in one or two crops. From this point of view it is easy to explain the large figure reached in this country for registered loans against security and the recent tendency in agricultural credit operations to prefer loans against movable property. Law No. 9,644 created a public instrument of credit which allows the easy mobilisation of the movable and semi-movable capital of the farmer by guaranteeing to the

(1) EGIDIO PARDINI: Le anticipazioni sui prodotti agricoli a traverso le associazioni agrarie cooperative in rapporto all'organizzazione delle vendite collettive, alla difesa dei prezzi e all'indirizzio della produzione. Report made at the Vth International Conference of Agricultural Credit, Vienna, 9-11 September 1936.

(2) CARCANO DOCTOR MIGUEL ANGEL, Ministro de Agricultura: Memoria correspondiente al ejercicio de 1935 presentada al Congreso de la Nación. Ministerio de Agricultura de la Nación Argentina. Buenos Aires, 1936.

creditor the sums advanced by him by means of a more secure charge. The agricultural pledge instituted by this law can be backed by:

- (a) Machinery in general, agricultural tools and instruments;
- (b) All kinds of animals and their products and movable goods appropriate to a farm;
- (c) All kinds of agricultural products of the agricultural year in which the credit falls due for repayment, whether they be hanging, standing, or harvested or gathered crops; and also timber, mining products and products of natural industry.

The goods given as security guarantee to the privileged creditor the loan, interest, and expenses incurred.

The debtor keeps possession of the goods which form the creditor's security.

Agricultural privilege, however, does not affect the prior claim of the landowner for rent due or for the sum due in cash for the use of the goods during the same time, if the debt is anterior to the giving of the guarantee, provided that the relative contract was registered previously to that of the guarantee contract with the public registrar concerned with these contracts.

The contract of guarantee can be made by either a public or a private act. But it is effective as concerns third parties from the day of its registration in the special register.

The registrar delivers at the time of registration a certificate which contains the names of the contracting parties, the amount of the loan and the date on which it has to be repaid, the kind, quantity, and location of the goods given as security and the date of the registration.

Fruits and animal and farm products can be sold by the debtor at the time when they are ready for sale but the buyer will not be able to take delivery until the creditor has been paid the amounts for which these goods are security.

The guarantee certificate is transferable by endorsement; and all those who sign or endorse a guarantee certificate are jointly responsible.

In the case of the sale of goods given as security either by a reciprocal agreement or as the results of a legal proceedings, the product of this sale is distributed in the following manner and order:

(a) Payment of the costs of a sale by order of a court and of administration charges from the day of the contract to the day of the distribution of the proceeds of the sale;

(b) Payment of taxes;

(c) Payment of the rent of the farm if the debtor is not the owner;

(d) Payment of capital and interest on the loan or loans in order of their registration;

(e) Payment of wages, salaries and the costs of harvesting, threshing, etc., due before the date of the contract provided that they have a preference according to civil law. The balance will belong to the debtor and will be paid to him.

The development of the system of agricultural guarantee can be seen from the following figures which refer to the period from the coming into force of the law described above until the end of 1935.

Registration of Agricultural Pledges.

Year	Number of contracts	Value in pesos m/n
1915 (1)	7,954	72,292,538
1916	10,850	104,560,068
1917	14,102	141,860,387
1918	22,736	185,949,913
1919	21,873	235,055,484
1920	13,736	273,791,639
1921	16,866	283,479,274
1922	17,995	269,312,079
1923	16,305	122,270,375
1924	15,036	174,910,353
1925	16,531	172,226,898
1926	23,884	187,694,976
1927	25,874	207,246,379
1928	40,483	271,419,144
1929	53,216	287,101,446
1930	78,460	398,566,377
1931	75,876	332,921,035
1932	68,361	312,596,917
1933	87,018	296,350,950
1934	94,943	367,166,150
1935	74,765	306,505,057

(1) Including the month of December 1914.

In 1935 contracts guaranteed by live-stock and live-stock products were 4,680 in number, 6.2 per cent. of the general total shown in the table, and 43,325,041 pesos m/n, 14.1 per cent. of the total.

Contracts guaranteed by the products of farming and of agricultural industry were greater in number, being 30,022, 40 per cent. of the total, and their value was also greater being 142,918,965 pesos m/n, 46.6 per cent. of the total.

Official action was more important in the case of this kind of loan against pledge by reason of the loans granted by the *Junta Reguladora de Granos*, the *Junta Reguladora de Vinos*, the *Comisión Nacional de Defensa contra la Langosta*, the *Junta Nacional del Algodón* and the *Banco de la Nación Argentina*.

The number of loans against guarantee given by the *Banco de la Nación Argentina* in 1935 was 6,788, amounting to 31,531,048 pesos m/n, concerned especially with wheat, flax, maize, and barley.

The loans granted by this bank responded to the numerous farmers' necessities during the whole period of production up to the harvest, and had the object of preventing forced sales of the products and of so maintaining the prices of these products.

Pledges against agricultural implements and machinery in 1935 numbered 10,361, 13.8 per cent. of the total, and amounted to 31,391,527 pesos m/n, 10.2 per cent. of the total. These loans allowed the farmers to get at the most opportune moment and under favourable conditions implements essential to their work.

Loans against security of machines not strictly agricultural, motor-cars, lorries, and tractors, as well as against other categories of goods, complete the total of contracts against guarantee given in the table.

France.

There has been in France during the last few years a large development of the system of crop finance, above all in connection with the measures which have been adopted for the organisation and defence of the market for wheat and wine (1).

For these operations are used not only bank deposits but also resources placed by the State at disposal of the mutual agricultural credit institutions.

Various laws have for this purpose put special credits at the disposal of the National Agricultural Credit Bank. Thus, the Law of 26 January 1933 provided a credit of 300 million francs for the financing of the wheat harvest of 1932; the Laws of 28 February, 4 July, and 9 July 1934 provided respectively 100 million, 200 million, and 500 million for the harvest of 1933, and the Law of 18 April 1935 finally granted 300 million for the harvest of 1934. The Law of 24 March 1936 renewed these various credits up 31 December 1939 in order to provide for the financing of future harvests.

The farmer who desires to obtain an advance against his harvest generally signs a promissory note or a warrant in favour of a local agricultural credit bank which rediscounts the note or warrant at the regional bank; the latter in turn rediscounts it at the National Agricultural Credit Bank or at the Bank of France.

The warrant is a special transferable certificate which states the amount of the loan, the date of repayment and the security backing the loan; the law of 30 April 1906 sought to make such a certificate a true credit instrument by provisions to allow it to circulate and to assure its payment when due. Thus, the warrant is transferable by endorsement and those who have signed or endorsed a warrant have joint liability. Further, if the borrower fails to meet his liabilities when the warrant becomes due, the holder can in a simple and rapid way have the security sold, and Article 12 of the same law gives to the holder of the warrant a preference in respect of the proceeds of the sale over almost all preferential creditors, and in the case that the funds obtained from the sale do not suffice to satisfy the claims of the holders Article 13 gives him further resource against the endorsers and the borrower.

By the terms of Article 1 of the Decree-Law of 28 September 1935 which replaces the corresponding provisions in the Law of 30 April 1906 (2), it is indispensable to be a farmer in order to be able to issue an agricultural warrant, since this law is concerned with a credit system created for the exclusive benefit of agriculturists; but the expression "any agriculturist" used in the law makes it clear that the word "agriculturist" should be understood in the widest sense, referring to any individual who is occupied in the cultivation of the soil, whether he be an owner cultivating his own land, a farmer holding land by lease, or a métayer farmer; the latter is an "agriculturist" at least in respect of that part of the agricultural products of which he becomes exclusive owner after the division of the harvest.

(1) See the report of Prof. LOUIS TARDY, already quoted.

(2) J. CARRET, work already quoted.

Of course the agriculturist can issue a warrant only against those things of which he is the owner. According to the Decree-Law of 28 September 1935 which increased considerably the scope of the agricultural warrant system and thus contributed to an increase in the credit facilities available to the agriculturists the following goods can be used as security backing a warrant:

- (a) products of the farm concerned including the animals and sea-salt;
- (b) all kinds of material used to hold the goods backing warrants;
- (c) in a general fashion and without distinction all goods composing the stock appropriate to the farm;
- (d) ungathered crops;
- (e) goods having, in accordance with article 520 and 524 of the Civil Code, the character of real estate, by nature or destination, with the exception of those fixed to a wall.

The term of the bills or warrants is normally 3 months; it may be as much as six months with the possibility of renewal in justified cases.

The agricultural credit banks proportion the size of the financing loans which they grant to the size of the harvests to which they refer, and they are obliged to limit the loans to a figure lower than the value of the harvests.

The loans granted to wheat-producers to finance their harvests reached in 1936 75 francs per quintal, and those granted to vine-growers were limited to four francs per degree hectolitre.

A maximum rate of interest has been established for crop finance loans granted by the agricultural credit banks. For 1936 this rate was not to exceed by more than one per cent. the discount rate of the Bank of France.

The system of security by which the agricultural credit banks could cover the crop financing operations was improved by the Decree-Law of 28 September 1935. This law authorises the agricultural co-operative societies to use as security for warrants not only the products of which they are the owners but also products derived exclusively from the harvest of members and supplied by them. Further, the holders of warrants issued against wines and alcohols can in future demand of the excise officers that they grant certificates allowing the transfer of the security for these warrants only with their consent, and if the warrants are not paid when they fall due they themselves can obtain certificates authorising the transport of these wines with a view to their sale or distillation.

Another decree-law of 23 October 1935 instituted a new kind of security; it provided that the mere inscription at the indirect taxes office of a guarantee undertaking confers on the lender in respect of a determinate quantity of wine or alcohol from the distillation of this wine a privilege right of the same order and nature as that of a holder of an agricultural warrant. The National Agricultural Credit Bank, the regional agricultural credit banks, and general banks can receive these guarantee undertakings as simple commercial bills dispensing with one of the signatures usually required.

The existence of co-operative societies formed by producers contributes to increase the security of financial operations. They can, in fact, offer as security to the agricultural credit banks either a collective warrant or a joint undertaking by their managers to repay.

For individual loans the National Agricultural Credit Bank has suggested that guarantees should be provided not only by pledges or warrants but by the formation of small groups of agriculturists to give joint guarantees to the agricultural credit banks.

During the last few years importance has attached above all to the crop finance operations in respect of wheat and wine. Loans have also been granted for the financing of certain other products: wool, alcohol, spirits, and flower essences, etc.

The legislation in respect of the defence of the market for wheat (1) has encouraged the agriculturists and professional groups to stock their harvests and then to spread their sales. This system of storing and spread sales has had favourable results and it has even taken on an obligatory character for the wheat-producers' co-operative societies that have made a contract with the Ministry of Agriculture for the stocking of their products.

The financing of wheat harvests has been carried out up to the present time through the co-operative societies. The loans granted for the financing for the wheat harvests have actually been:

for the 1932 harvest, 139 millions to groups and 73 millions to individuals;
for the 1933 harvest, 513 millions to groups and 75 millions to individuals;
for the 1934 harvest, 491 millions to groups and 30 millions to individuals;
for the 1935 harvest, 395 millions to groups and 20 millions to individuals.

The Law of 15 August 1936 which created the National Wheat Office will lead to a further very large increase in the financial operations in respect to future harvests.

The agricultural co-operative societies are called by this law to play a very important part in the storing and sale of wheat.

The cultivators belonging to them receive immediately they deliver their harvest to the co-operative society the total price of this delivery up to 50 quintals and a payment on account of one half of the price in respect to the surplus. It has also been provided that the payments on account shall be made by the co-operative societies in respect of deferred deliveries of wheat remaining for the moment with the producers.

The wheat co-operative societies thus have need, for this financing, of large sums which they obtain by discount operations at the agricultural credit banks and the Bank of France.

While the loans granted in respect of the financing of the recent crop harvests had been made mainly to co-operative societies, in the case of credits to wine growers individual loans have been the most important.

For the total harvest for 1934 and 1935 loans amounting to 264 million francs have been granted, five sixths being loans to individuals.

The statistical inquiries made each year by the National Agricultural Credit Bank show that since 1906 223,600 agricultural warrants have been issued against 5,352 million francs of agricultural products given as security for loans amounting to 2,252 million francs.

(1) L'OFFICE NATIONAL INTERPROFESSIONNEL DU BLÉ. Law of 15 August 1936 and principal regulations. Fédération Nationale de la Mutualité et de la Coopération Agricoles. Paris, 1936.

Italy.

The principal law on agricultural credits (Royal Decree-Law of 29 July 1927, No. 1,509, converted into the Law of 5 July 1928, No. 1,760) includes in farm credit operations advances against the pledging of agricultural products. These advances can be made either to individuals or to associations which cultivate land by virtue of a legal title or any form of contract. But they are granted only in favour of producers in the case of retarded sale or unsold products; they cannot exceed three fifths of the current value of the products given as security and they must be reduced or repaid even before their due date if the goods are either partially or totally withdrawn or if they have perished or deteriorated.

All the special agricultural credit institutions, as well as the saving banks and ordinary institutions and co-operative credit societies which have the relative authorisation from the Ministry of Agriculture and Forests, conduct among other things this kind of financing. This form of financing tends to further increase at the present time as a result of the adoption of the system of pooled sales for the principal agricultural products, a system which is considered as the most appropriate means to maintain prices at a stable and remunerative level. This system, at first voluntary, has been made obligatory in respect of wheat, hemp, cocoons, and wool.

Thus, producers who delivered wheat to the organisations charged with the responsibility of collecting the harvest (Decree-Law No. 1,273 of 15 June 1936) received a net price fixed recently at 125 liras per quintal for soft wheat and 140 liras per quintal for hard wheat.

The lending institutions grant to these organisations advances to an amount equal to the sum paid to the agriculturist. The rate of interest on these advances cannot be less than the official rate of discount.

These advances are secured by a special charge on the wheat delivered by the producer and on the final proceeds of its sale.

In order to defend and to develop the production and trade in hemp, obligatory consortia had been set up which are authorized (Decree-Law of 8 November 1936, No. 1,955) to grant loans to growers. They can give as security the hemp which they have collected in order to obtain the necessary finances.

From the beginning of December 1933 this system has also been applied to rice producers who have been guaranteed an equitable price, payable at a date fixed in advance each year, for each quintal of rice remaining unsold at that date. It has indeed been laid down that from 15 October 1936 all rice producers shall be able to obtain an advance of 65 liras per quintal of paddy from credit institutions specified for this purpose; the advance is to be secured by the products and the rates of interest are fixed at not more than $\frac{1}{2}$ per cent. above the official rate of discount.

According to the Decree-Law No. 812 of 15 April 1937 all nationally produced cocoons shall be delivered by producers in order that they may be pooled, dried, and collectively sold. At the moment of delivery the producers receive from the organisations charged with these functions an advance equal to the

minimum guarantee price, that is to say 7 liras per kilogramme for yellow cocoons and 7.50 liras per kilogramme for white cocoons.

Arrangements were made for wool by the Decree-Law No. 521 of 8 March 1937 based on the same principles as the measures taken in respect of other products discussed above.

Poland.

Crop finance credits have played an important part in the development of agricultural production in this country particularly during the economic crisis. Wheat harvests in particular have attracted the attention of the Government. The trade in cereals in this country has always been characterized, in fact, by a strong tendency to an increase in the amounts coming on the market for sale during the months following the harvest and to a decrease of the amounts offered for sale in the months preceding the harvest. The reason for this is a permanent lack of own working capital on most of the farms (1). This state of affairs tended to involve very large fluctuations in the prices registered during the agricultural year. The introduction of a system of warrants allowing the agriculturist to obtain loans secured by cereals leads him to limit the amount that he offers for sale immediately after the harvest and to adjust during the whole year the amounts he puts on the market to the demand.

Agricultural warrants were created by the Decree of the President of the Republic of 22 March 1928. According to this decree products of agriculture and agricultural industry may back a warrant. Warrants can be issued only by real or legal persons managing farms or agricultural-industrial undertakings which use, on principle, for raw materials products produced on their own land.

The warrant can be issued in favour of credit institutions specified by the Minister of Finance. The security for the warrant can only be products of agriculture or agricultural industry which belong to the debtor, and only on condition that these products are not considered, according to current laws, as fixed property by nature, by law, or by destination. These products must either be in the possession of the debtor or under his administration or control. The basis of the warrant is a contract signed before a notary or under private seal with the legalisation of the signature of the debtor by a notary or court.

The claims of third parties against the warrant are established by the registration of the security rights in the register of warrants. This register is open to the public. A separate registration is made for each farm or industrial-agricultural undertaking.

As in other countries the goods given as security remain in the possession of the debtor.

The agricultural warrant can be transferred to another credit institution by a written contract followed by the handing over to this institution of the original contract. The transfer of the warrant affects third parties only when it is en-

(1) MICHEL WIERUSZ-KOWALSKI: Le financement des récoltes. *L'Est Européen Agricole*, No. 19, October 1936. Paris.

tered in the warrants register. According to the law the security rights expire at the end of 3 years from the date of registration. Every intentional deterioration, every illegal removal of the security, and the intentional giving as security of goods not belonging to the debtor, entail a penal liability without prejudice to the ordinary civil liability.

However, experience has shown that the Decree of 22 March 1928 did not protect sufficiently the interests of the secured creditors that is to say credit institutions. This became obvious during the economic crisis. In 1931 there were frequent cases of the illegal removal of the securities. Among the elements of weakness in the agricultural warrant system was also the possibility for third parties to seize the goods given as security. This possibility greatly reduced the rights of the secured creditor and even often made his rights illusory. These reasons led the Government to modify the Decree of 22 March 1928. This was the object of a new Decree issued by the President of the Republic on 23 August 1932.

The changes were concerned mainly with two points; first, the protection of the security against seizure by third parties, and second, the increase in the penalties imposed on dishonest debtors and on third parties who consciously contravened the provisions of the Decree. Thus the change had the object of strengthening the guarantees given to the creditor by the security.

This amendment stipulated that the security should not be subject to distraint nor added to the assets in the case of the bankruptcy of the owner to cover either private debts or tax and commercial debts with the exception of the land tax, and the tax on capital and the industrial tax. This protection against seizure lasts as long as the credit guaranteed by the warrant has not been repaid.

According to the terms of the amendment, credit institutions have the right to sell the security in order to recover the amount advanced. It was stipulated that the secured creditor has the right to sell the goods backing the warrant in order to obtain payment of his credit either on the exchange, if the goods are dealt in on the exchange, or by public sale.

Further, the new Decree suppresses the optional character of the penal sanctions and introduces a penalty of imprisonment in addition to a fine. The penal sanctions have been extended to all persons other than the debtor who in transactions concerned with the securities have deprived the debtor of the possession of the goods forming the securities, knowing of the existence of the warrant. Intentional destruction, illicit removal, or the tacit agreement to the removal of the security, the giving as security for a warrant of goods not belonging to the debtor, are punished by a penalty of imprisonment for a period between six months and two years and by a fine of 10,000 zlotys at most.

Credits can today be granted against the security of wheat, rye, oats, barley, oil plants, and forage crops, etc. They can be granted during the whole of the agricultural year.

Credits against registered securities put at the disposal of the owners of more than 50 to 100 hectares amounted in 1935-36 to 40 millions zlotys and remained during 1936-37 at the same level. In principle, these credits can only be opened at the moment when the wheat is harvested and stocked. Nevertheless, during the year 1936-37 the credit institutions were authorised to make pay-

ments on account which could reach 25 per cent. of the amount provided by the credit against the warrant; these payments on account have the object of decreasing the numbers of cases of sale of standing wheat by farms which particularly lack funds necessary to cover the cost of the harvest. The credits can be granted up to an amount of 50 per cent. of the value of unthreshed wheat or to the amount of 70 per cent. if the security for the warrant comprises wheat grain. The value is calculated according to the registered prices on the exchanges in the large towns.

Other Countries.

In **Bulgaria** the organisation of agricultural credit which has its main centre in the Agricultural and Co-operative Bank also includes loans against the security of movable goods (warrants). In 1935 266,507 loans of this kind amounting to 1,190,668,094 leva were granted to farmers. The credits granted by this bank are mainly in favour of silk production, the essence of roses industry, the sale of cotton and flax, and the supply of cereals. The directions given by the State to agricultural policy shows that credit is changing in form from direct loans granted to agriculturists or co-operatives to larger credits for production and sale.

In **Greece** the Agricultural Bank contributes among other things to the marketing of agricultural products and the stabilisation of prices. To this end an agricultural credit system is operated mainly by means of advances against products granted either to individual agriculturists or to co-operative societies. By this means it is sought not only to maintain prices but also to increase and to improve production by financing the crops.

The system of the pooling of products and of advances against these products is organised in **Hungary** through the agricultural co-operative societies and the Central Mutual Credit Institution, which is assisted and controlled by the State. A special form of advances is that known as green credits, that is to say, credits granted against standing crops. Each spring, regulations are made by decree concerning the procedure in respect of these credits. Recent laws facilitate the granting of advances against products and above all advances against sale contracts and production contracts.

In **Romania**, the Central Co-operative Bank with the assistance of the Central Import and Export Co-operative Society has organised cereal crop finance with the particular object of improving the price of the products.

In this system the producers deposit the cereals, either directly or through the co-operative societies and the federations, either in the storehouses of the Central Co-operative Bank or in trucks sent to its address or to an address indicated by it. For cereals thus deposited the producers receive a loan against a security undertaking with a sale order. This order can be either for an immediate sale at current prices or for sale at a minimum price within a maximum period of 30 days according to the choice of those who deposit the goods. In the case where an order for sale at a minimum price is given, if the goods cannot be sold within the 30 days at the specified price, the sale will be made at the current price within the following 15 days, at the outside. In the case of an order for an immediate sale at the current price, the advance shall be of an amount equivalent to 75 per cent. of the value of the cereals calculated according to the

rate at Braïla; in the case of an order for sale at a minimum price established by the producer the advance shall be 50 per cent. of the value of the cereals calculated in the same way.

The agreements pledging the goods and authorising their sale received by the bank from the co-operative societies or the federations are sent to the Central Import and Export Co-operative Society which once it has possession of these documents makes the sale contracts.

The advances are paid to the producers by the federations, people's banks, and co-operative societies which are supplied for this purpose with the necessary funds by the banks.

Immediately after the sale of the cereals by the Central Import and Export Co-operative Society the bank proceeds to the final liquidation of the accounts in favour of the producers who participated in the operations.

Account must also be taken of the law published in the *Monitorul Oficial* No. 81 of 7 April 1937 concerning the general storehouses and the issuing of warrants against goods and cereals. Formerly, this operation was regulated by the Law of 1881 concerning general storehouses, a law modified in 1882. The object of the new law is to complete the old by detailed regulations of the operations entailed in the issuing of warrants, the conditions under which warrant-receipts are to be delivered, the negotiability of these warrants, etc.

In contrast with ordinary law the measure provides that when goods have been the object of the issue of a warrant, this warrant gives only a legal title of possession of the goods, a possession operative only so long as the goods are in the possession of the debtor.

The law contains rules for the liquidation for warrant-receipts as well as for the proceedings in the case of non-payment.

The law grants to the Romanian Storehouse Society the right itself to issue warrant-receipts which when they are concerned with cereals are exempt from stamp taxes. These documents can be lodged as security at the National Bank of Romania during 120 days and for an amount representing at most 75 per cent. of the value of the goods calculated according to the prices on the exchanges of Braïla, Galatzi, or Constantza, for the day on which the advance was granted.

The right to issue receipt warrants may also be granted by a new law to other societies which will be responsible for the regularity of the bills thus issued and for the conservation in good condition of the goods deposited.

In the countries of Latin America there has been a remarkable development in advances against security. The law of 22 March 1918 introduced in **Uruguay** a similar system to that which existed in Argentina and which we have already described above. On 31 December 1936 current operations against agricultural security at the Bank of the Republic amounted to 1,258,318 pesos (1).

In **Colombia** the use of agricultural products as security for loans was instituted by a law No. 24 of 5 November 1921. This law is based on the same principles as the laws in Argentina and Uruguay.

G. COSTANZO

(1) BANCO DE LA REPÚBLICA O. DEL URUGUAY. MEMORIA Y BALANCE GENERAL CORRESPONDIENTE AL EJERCICIO TERMINADO EN EL 31 DE DICIEMBRE DE 1936. Montevideo, 1937.

THE INTERNATIONAL SUGAR AGREEMENT

The Antecedents of the International Sugar Conference.

The attempts of the principal sugar-exporting countries to cope with the steady fall in sugar prices from 1927 onwards led in 1930 to the five-year agreement, known as the Chadbourne Plan, between Cuba, Java, Peru, and the five European exporting countries, Belgium, Czechoslovakia, Germany, Hungary and Poland. World production decreased in 1931-32 and 1932-33, reductions in these countries and in most of the beet-sugar producing countries outside of the agreement being sufficient to outweigh the appreciable increases elsewhere, notably in India, Japan, and Egypt and in countries supplying the United States market. There was a heavy fall in world consumption, however, and stocks rose to a maximum of 10,897,000 metric tons raw value (Licht) at the end of 1931-32 and were still at the high level of 9,888,000 a year later. Meanwhile the fall in prices continued. In 1933-34 production increased and the upward movement continued in the following three seasons, thanks principally to increases in the beet-growing countries, India and Cuba. Increase in consumption prevented the level of stocks from rising, however, and in 1935 and 1936 the price situation on the London market remained more or less stagnant.

To the "Chadbourne" countries, which had reduced both their production and their net exports by 46 per cent., the position at the 'end of five years' sacrifices was very unsatisfactory and not all of them agreed even to become members of the International Sugar Committee that was founded in August 1935 to watch the situation.

At the World Monetary and Economic Conference in 1933 Cuba brought forward a project for a ten-year intergovernmental agreement, under which there would be no increase in factory capacity, no additional assistance to production or export and, up to 1 September 1935, no increase of import duties to over 70 per cent. ad valorem. The project was opposed by the United Kingdom Government, which desired to retain full tariff freedom and considered that limitations on factory development would check technical progress, preventing, for example, amalgamations or geographical redistribution. The United Kingdom Government also indicated its opposition to any reduction in the home beet-sugar industry.

Further international discussions did not take place until March 1934, when the "Chadbourne" countries, with the exception of Germany, met representatives of the United States and the United Kingdom. At that date neither of the last two countries had stabilized their national sugar policies and for this reason it was impossible to come to any decision. The United Kingdom offered, however, to limit home production and also to stabilize export from the Crown Colonies for two years at 850,000 long tons (864,000 metric tons) and three years at 878,000 tons (892,000), 914,000 (929,000) and 950,000 (965,000) tons respectively.

The British Government continued to study the possibilities of bringing about a comprehensive international agreement and in its memorandum of July 1935 repeated its previous offer but at this time general feeling was not favourable to the setting up of a new plan. The considerable increases in consumption in 1934-35

and 1935-36, however, had reduced stocks by the end of the latter season to a figure lower than in any of the preceding seven years. On the other hand there was a feeling of insecurity due to the extension of production in some countries and the latent capacity elsewhere. In these circumstances the need for stabilization was more generally felt than before.

The International Sugar Conference, summoned in the name of the Bureau of the World Monetary and Economic Conference, met in London on 5 April 1937, the Governments of 21 countries being represented. The conference lasted about five weeks and it was not until 6 May 1937 that the International Agreement regarding the Regulation of Production and Marketing of Sugar was signed. Negotiations were carried on with the separate countries by a committee comprising representatives of France, Germany, the United Kingdom and the United States, under the chairmanship of the last.

The Regulation of the Free Market.

The experience of the Chadbourne Plan had shown that a necessary preliminary to the determination of workable quotas for the exporting countries is the stabilization of conditions in the free market. As all the exporting countries desired to maintain or even increase their exports, while, on the other hand, it could only be hoped that consumption would continue the upward movement that had prevailed in 1936-37, the non-exporting countries had to be asked to give definite guarantees to take no action that would lead to a shrinkage of the free market. While the self-sufficing countries had to be prevented from becoming exporters, the importing countries had to be induced to maintain or even increase the quantities taken from non-preferential sources.

Under Chapter III of the Agreement the importing countries accordingly undertake not to encourage further expansion of the industry by bounties, protective duties, subsidies or other means. It is provided that any exporting countries whose free market possibilities undergo serious change may withdraw on declaration of the facts by the Council or by arbitrators. The original estimate of free market requirements in 1936-37, which was used as a provisional basis for negotiations, was 3,107,000 metric tons, revised at an early stage to 3,300,000 metric tons. On the assumption of a 3-3 ½ per cent. increase for 1937-38, a figure of 3,407,500 tons was subsequently adopted as basis.

The United Kingdom is responsible for over one-fifth of the requirements of the free market. A primary condition of British participation in an international agreement had been that nothing should be done that might diminish the market for Colonial and Dominion sugars in the United Kingdom. On the contrary, the British Government desired to ensure to these producers the advantages accruing from any increase of demand in that market. It was partly for this reason that the original Cuban proposals to the World Monetary and Economic Conference in 1933 had failed, the British Government desiring to retain full freedom to regulate its tariff for this purpose as long as there was not a much more complete international participation in an agreement than then seemed possible. Canada, which offers a substantial free market, its own

beet-sugar industry covering about 10-15 per cent. of its requirements also participated in the Conference and stated that it would not encourage additional production provided that no rise in prices were stimulated. The total requirements of the British Empire in 1936-37 were estimated at 3,300,000 metric tons. Taking this figure, 34.0 per cent. is left to foreign suppliers and this percentage is guaranteed for succeeding years of the Agreement. The Colonies and Dominions are guaranteed their present proportion of 47.4 per cent. and will no doubt continue to take advantage of it. Production in the United Kingdom, however, is not likely to increase beyond the level of 618,000 metric tons white sugar, accepted as a nominal basis in the first year, so that it will not utilize its full percentage in subsequent years. For 1937-38 a 3 per cent. increase in British Empire requirements was subsequently estimated and intimated to the Council at the July meeting; 1937-38 requirements would therefore be 3,430,000 tons. The British Government is to introduce a bill for the extension of the existing preferences for the duration of the Agreement.

Australia, the principal Empire source of United Kingdom imports, receives a quota of 406,423 metric tons, practically equivalent to the 1936-37 export and only 20,000 tons below the record of 1936, a year of unusually favourable weather conditions. It agreed not to claim its share in any increase in the first year, so adding a certain quantity to the free market. Australia thus maintains the status quo of its industry as an exporter but, while it is already possessed of a highly organized industry, it will require to tighten up the internal regulation of production. The Union of South Africa, which extended its production control system for a further five years from 30 April 1936 and which limits its production to 476,488 short tons (432,263 metric tons), is in a somewhat similar position to Australia but has received a quota slightly lower than it expected, 230,000 short tons (209,000 metric tons) against 224,000 short tons (203,000) and larger than its maximum of 220,424 short tons (199,965) in 1935. Like Australia, the Union will not claim its share of any increase in British Empire consumption in the first year.

The British Colonies were granted 965,245 metric tons (950,000 long tons) as a basic quota; they receive their share of the 3 per cent. increase in consumption and in addition the United Kingdom has transferred to them its share in the increase for 1937-38. The total net quota for the Colonies in 1937-38 was subsequently established at 997,000 long tons (1,013,000 metric tons). The basic quota of 950,000 long tons was arrived at by the Colonial Office by taking the peak export of each Colony (except the East African group) up to and including 1936 and subtracting 7 per cent. East Africa was given an increase on its peak export in recognition of the fact that its industry is in a pioneer state. Subsequently the Permanent Advisory Committee of Colonial Sugar Producers at the Colonial Office recommended that three-fifths of the balance due to the 3 per cent. increases (including that received from the United Kingdom) be allocated proportionally amongst all the dependencies other than East Africa and the remaining two-fifths be used to make special allowances for the social-economic conditions in particular Colonies. The Colonial Office indicated that in allocating the growers' quotas within the

individual Colonies special consideration should be given to "cane-farmers." Should any Colony be unable to fulfil its quota, British Guiana and Fiji are to have a prior claim in redistribution.

The Government of India has agreed to prohibit exports of sugar by sea unless to Burma; provided Burma does not reexport, this exception does not, in fact, affect the status quo since Burma was politically part of India until 1 April 1937.

Like the United Kingdom, the United States has its own problem of adjusting quotas for sugar supplies from a number of very different sources and in both instances, though they are not exporters, the international regulation of the sugar market has therefore a direct interest for the Treasury. The Government of the United States agrees to take from countries not enjoying a preference a proportion of its Continental requirements at least equal to that allotted in 1937 under the Jones-Costigan Act. In calculating the net import from full-duty countries reexports of Cuban sugar are not to be reckoned and, should the Philippine quota be reduced below 800,000 tons raws and 50,000 tons refined, the net import from these countries will be correspondingly increased.

The Sugar Control Act of 1934 (the Jones-Costigan Act) already prolonged for a year, expires on 31 December 1937. A new Act, signed on 1 September 1937, however, continues for a further three years both the quota system and benefit payments to growers, the latter paid as soil conservation grants, financed, however, by an excise tax instead of the processing tax, the use of which for controlling production was declared unconstitutional by the Supreme Court in January 1936. The tax is reduced from 75 cents per 100 pounds raw sugar to 50 cents which is the maximum allowed for Cuba by the Trade Agreement of 1934. The size of the total allocation is of the highest importance, the tariff alone being insufficient to raise prices to a level profitable to the domestic industry. The quotas for imports into the United States will be for Cuba 1,911,476 short tons (1,734,062 metric tons), 29 per cent. of the total requirements, for the Philippines 1,029,781 (934,202) or 15 per cent. and for other foreign sugars only 26,419 (23,967) or 0.4 per cent, proportions identical with those under the revised 1937 quotas. Under the new Act continental producers supply 30 per cent. of the total requirements and insular producers 26 per cent. While a percentage basis is fixed, the 3,715,000 short tons (3,370,000) raw value to which these quotas of the 6,682,670 short tons (6,062,418) total requirements result is a minimum.

The soil conservation grants paid to the United States continental and insular producers, like the previous benefit payments, are used as a levy to improve farming practices and labour conditions, being made dependent on fair wages and non employment of child-labour; by means of a sliding scale of payments "family farms" also receive more favourable treatment than farms producing larger quantities of beet or cane.

Requirements for the following year are estimated in December on the basis of distribution statistics for the preceding year from November to October and taking into account on the one hand stocks and on the other growth of population. Deficits on United States continental or insular cane or beet quotas are mutually transferable. Payments are also made for crop deficits outside the control of the producers.

The imports from the free market are so insignificant in the total of the United States requirements and in the total of the free market that the increase of consumption in that country practically affects only the United States duty-free and preferential suppliers. In 1936-37 domestic beet-sugar production, though the largest since 1933-34, thanks to a large harvested area, did not attain the revised quota for this year. Domestic cane-sugar production, on the other hand, which was a record, exceeded the quota, area having increased and unit-yields having been high. The cane area is extending and the quota of 420,166 short tons (381,168 metric tons) for 1937-38 is higher than that awarded in 1936-37, which was 319,340 short tons (289,700). Whether continental cane and beet production continue the upward movement that has characterized the last decade depends on the future regulation of the United States market.

In Hawaii the limitation of the market by the quota system has already been effected by reducing the cane area; decline in production from the maximum of 1933 has been relatively small. In Puerto Rico surplus cane is sold to the Government for the production of molasses; exports have maintained a high level in most years since 1929. In the Virgin Islands, which are entirely exploited by the Government through the Virgin Islands Company, established in 1934, the bulk of the cane is utilized for rum production and restriction of sugar output to the United States import quota offers no difficulty; exports were already greatly reduced in 1935.

The Philippines agree not to export to other countries than the United States, as long as they receive from the latter, under the Independence Act, the quota of 800,000 short tons (726,000 metric tons) raws and 50,000 (45,000) refined, unless the Council decides to allot additional quotas under Article 20 (concerning increased market requirements), when they shall receive 4 per cent. of the aggregate additional quotas. Should the United States reduce the quota for the Philippines the latter will be entitled to receive a basic quota on the free market. No increase can be claimed, however, in the event of a change in the United States tariff. The Philippines will also waive any potential advantages under the most-favoured-nation clause during the currency of the Agreement, other countries on their side making a similar renunciation should the United States grant any advantages to the Philippines.

The undertaking by the Philippines not to begin placing sugar on the free market removes one of the most serious fears of other exporters. There had been a further rapid upward movement of production from 1930-31 and by 1933-1934 cane area planted had attained 305,890 hectares (755,882 acres) and production of sugar 1,471,000 metric tons. The 1934 limitation law in the Philippines expires with the 1936-37 season. To enable production to be limited to the amount of the United States quota plus internal requirements and a reserve of 10 per cent. of these two categories, the Philippine Government makes benefit payments to cane growers.

The position of China, the most important Far Eastern market, remains somewhat indefinite under the Agreement. The troubled political situation has meant great fluctuations in production and imports in recent years. In addition to the registered imports there is very extensive smuggling of Java

sugar into China by Japanese dealers, mainly though the Japanese territory of Kwantung. The Government has undertaken to endeavour to prevent any decrease in imports. For this purpose a National Sugar Trading Supervision Commission was established in June. As the Chinese Government has since become involved in hostilities it may, however, apply under Article 51 (a) for the suspension of its obligations under the Agreement.

The Regulation of Exports.

While on one side the Agreement guarantees against further shrinkage of the free market it has on the other to prevent competition between the exporters sharing that market; otherwise not only would prices be further reduced but the eventual reaction of the importers would be to introduce severer restrictions, with consequent further shrinkage of their requirements from the free market. Consequently, the principal exporters had to be asked to limit their exports.

Export quotas had to be fixed for thirteen of the countries represented at the Conference, and, in addition, an allowance had to be made for possible exports from two countries—France and Yugoslavia—in the form of a reserve quota. Most countries based their claims on actual exports of a recent year, or on a previous maximum export, emphasizing the importance of the industry in their internal economy or in their commercial policy. No general formula was found to harmonize these arguments. Naturally, there was considerable reluctance on the part of countries that had recently increased their exports to relinquish these gains and, as far as exports were concerned, only a standstill agreement could be expected. The total basic allocation eventually agreed on was 3,670,000 metric tons, including 47,500 tons reserve quota. Apart from the process of bargaining, three expedients were adopted to harmonize the figure of total export allocation with that of free market requirements, namely: (1) a net quota for the first year of the Agreement, (2) an upward revision of the free market estimate, and (3) empowering the Council to reduce, if necessary, the net export quotas in the first two years of the Agreement and in subsequent years, should all the countries concerned accept, by up to 5 per cent. The first expedient was made possible by the fact that six countries were willing to sacrifice parts of their respective quotas during the first year, seeing that they would in any case be unable to use them entirely. In this way a reduction of 149,000 metric tons was obtained in the total for Belgium, France, Germany, Hungary, Poland, and the U. S. S. R. On the other hand the additional quantities granted to Czechoslovakia raised the total by 90,000 tons leaving a net reduction of 59,000 tons. The estimate of the free market was increased by a further 107,500 tons to 3,407,500, in the opportune hope that consumption would increase in 1937-38 by over 3 per cent. These two expedients together brought a further reduction of the disharmony to about 203,500 tons. The putting into force of the 5 per cent. reduction in 1937-38 would still leave an excess but the Negotiating Committee hoped that further amounts of the quotas might prove not to be used.

The crux of the negotiations was to establish the basic quotas, which were felt by the various countries to involve a question of principle. While a number

of countries were quite prepared not to utilize their full basic quota in the first year or two of the Agreement, it was felt that the level of the basic quotas would largely determine bargaining power in any subsequent discussions in later years of the Agreement.

Amongst European exporters Czechoslovakia has taken the first place since the War. When the free market began to shrink and particularly when the United Kingdom adopted the policy of protecting its refining industry, the fundamentals of the Czechoslovakian sugar industry were menaced. In recent years it has exported two-fifths of its production against two-thirds in 1927-28. In the endeavour to meet the changed situation the area under sugar-beet has in the last decade been reduced by half. Other crops are affected by the agricultural crisis so that substitution provides no remedy. Every decrease in export prices makes a lowering of taxes and internal prices more difficult. Efforts to extend the use of denatured sugar for feed do not go far to meet the problem. In 1937 a rise in export prices enabled the growers to claim an increase in beet area, though not up to the 1937 level and the 1937 area is only two-thirds of that of 1926-30. On account of this increase in area Czechoslovakia claimed at the Conference an export quota of 400,000 tons, a quantity greater than the probable 1936-37 export but maintaining roughly the 11 per cent. of the free market accepted under the Chadbourne Plan. An Agreement was eventually reached by adding to a basic quota of 250,000 tons quantities of 90,000 in 1937-38, 60,000 in 1938-39, and 25,000 in 1939-40, on the understanding that steps would be taken to reduce the beet area to corresponding levels.

Java had to sell about 87 per cent. of its pre-crisis crop on the free market; for a time its high level of technical efficiency enabled it to stand the strain of low prices and until the Chadbourne agreement it refused to become a party to any international agreement for the limitation of production or exports, believing that the only solution of the sugar problem was the reduction of the protective measures that had diminished the free market. The continued shrinkage of this market, however, together with growing doubts within the industry as to the future, induced it to join the Chadbourne countries in 1930-31. Nevertheless the weaknesses of that plan were more clearly seen in Java than elsewhere, and the industry continued to adjust itself by means of drastic economies to the situation on the free market. With the end of the Chadbourne system in August 1935, Java undertook a new and still more drastic regulation of its internal organization. Under the Hart scheme, which came into operation in 1936, half of the mill capacity is eliminated and the remainder is run at full capacity. Production is stabilized at 1,400,000 tons. The struggle to adjust the industry to the restricted free market has exhausted the large capital reserves that had been built up in the years of Java's great prosperity, and, though surplus stocks had been eliminated and it is believed that the reorganized Java industry could survive on the basis of free market prices, there are no longer reserves or the possibilities of further reorganization for the industry to meet unaided any further deterioration in export conditions. Java was therefore prepared for the sake of securing some measure of stability to join in a new agreement that would cover not only the great bulk of the world's

exporting capacity but the principal importing countries. The quota of 1,050,000 tons received maintains exports practically at the 1936-37 level, and in the first year of the Agreement Java obtains 29.2 per cent. of the total net export allocation. The Netherlands market is reserved for the Dutch beet-sugar producers. At present relatively small quantities of cane-sugar are imported from Java and Surinam and it is agreed that there will be no net export.

Cuba received a quota of 940,000 tons, equivalent to its 1936 exports. This quota remains larger, however, than that awarded under the Chadbourne Plan, when the estimate of the free market was very much larger. This, together with the still more important fact that the share of preferential sugars in the United Kingdom market is now stabilized, gives Cuba every reason for satisfaction. The Cuban share of the total net export allocation in the first year of the Agreement is 26.1 per cent.

Brazil, whose exports had fluctuated greatly in recent years, obtained a quota of 60,000 tons. Haiti, which, though without a preferential market, is a low-cost producer, received 32,500 tons as an export quota. Mozambique was granted 30,000 tons. The remaining two cane-sugar exporters, the Dominican Republic and Peru, depend entirely on the free market, apart from relatively small home consumption absorbing little over a tenth of their respective outputs, and have little or no possibility of finding a more profitable substitute for cane. The Dominican Republic received a quota of 400,000 tons, a figure exceeded only in 1932, 1935 and 1936 while Peru received 330,000 tons.

A prime condition of Soviet participation was that there should be no limitation of production or control of stocks or any other interference with the internal conditions of the sugar industry within the Soviet Union, where the Government is still building up the industry to meet the immense potential demand within its territories. The U. S. S. R. is now the world's largest producer after India and Cuba. The significance of the relatively small export lies in the obtaining of valuta. It is directed mainly to Iran and Afghanistan, but there are spasmodically large exports to the United Kingdom, Turkey, and other countries. A basic quota of 230,000 tons was granted, of which the Soviet delegation agreed that in the first year only 218,500 should be exported, that is, 6.1 per cent. of the total net allocation. Exports to Mongolia, Tannu Tuva and Sinkiang are not included in the quota.

Germany, though the principal sugar exporter of Europe before the Great War, has long been absent from the export market and did not utilize its quota under the Chadbourne Plan. It had, in fact, a net import in each of the three years ending 1934-35. Its production had recovered to 2,547,000 metric tons in 1930-31 but had fallen sharply to 1,091,000 in 1932-33. Since then there has been a gradual upward movement. The German delegation claimed the right to renew exports on a prewar scale, it being stated that efforts had been made to consolidate the industry by increasing internal consumption, that the process of internal reorganization for the supply of that market had been completed and that for exchange purposes export would be recommenced in the very near future on a relatively large scale under the Four-year Plan. As a recognition of this standpoint had been previously indicated as the condition of Ger-

man participation in an international agreement a basic quota of 120,000 tons was granted. As a quota of this size had been asked largely as a matter of principle and could not be fulfilled in 1937-38, the German delegation gave up for that year all but 50,000 tons.

For Poland, as for Czechoslovakia, the sugar export plays a particularly important part in the national economy and it has consistently been a heavy exporter. Since 1931-32 exports have been, however, on a lower level, averaging 96,000 tons in the four years ending 1935-36 and representing about one-third of the total production. A basic quota of 120,000 tons was granted, not to include Danzig. Of this it was agreed that only 100,000 tons should be utilized in 1937-38.

Hungary, which had already drastically limited its production after 1930-31 in conformity with the export difficulties of recent years, was granted a basic quota of 40,000 tons, of which only 20,000 tons, over double the export of 1935-1936, were to be used in the first year. Belgium claimed to have already adapted its scale of production to present market conditions; its production in the last decade has not shown any distinct tendency. In three recent years it has had a net import. A basic quota of 20,000 tons, of which only 15,000 would be utilized in the first year was therefore accepted as satisfactory.

For countries not normally exporting but whose arrangements for disposal of their production may be upset in years when unusually favourable weather results in high unit-yields a reserve quota of 47,500 tons has been set aside; of this 12,500 is at the disposal of Yugoslavia and the rest at that of France. For 1937-38 the French delegation stated that not more than 15,000 would be required. Production in France now practically balances consumption in that country, allowing also for the quota taken from the colonies. The regulatory agreement stimulated by the surplus of 1931 was extended and perfected in 1934 and 1935 to cover all home-grown sugar and establish a colonial quota.

Later signatories of the Agreement may be assigned additional quotas (Article 19) and, if a three-fifths vote of the Council decides that the market requires it, additional quotas may be allotted proportionally for periods up to one year to all countries, including those having only reserve quotas. Unused quotas may also be redistributed pro rata, unless the Council decides to use up to 25 per cent. or 50,000 tons, whichever is larger, of such amounts, to meet cases of special hardship; should the amount so available be less than 30,000 tons the Council may nevertheless use up to the latter amount to meet such a case of special hardship.

Stocks in the contracting countries are not to exceed 25 per cent. of annual production, unless the Council makes a special allotment. On the other hand those cane-producing countries to whom export quotas have been allotted shall regulate their production so that their stocks shall not be less than 10 per cent. of their quota for the year, unless prevented from doing so by adverse conditions. Cuba is given a special privilege of holding at the end of each calendar year stocks for the United States not exceeding 30 per cent. of its export quota to that country and stocks for the free market not exceeding 300,000 metric tons. Java may hold 500,000 tons or one-fourth of its crop each year, and Hungary 30 per cent. of its annual production.

The Agreement is not subject to denunciation during the five years of its operation but withdrawals are allowed by countries involved in hostilities, experiencing an acute shortage or suffering from adverse changes in the supply-demand relation on the free market. Notice of withdrawal by one Government in accordance with these provisions will entitle any other Government to give similar notice during the ensuing three months. Of the 100 votes on the Council 55 will be exercised by the exporting countries and 45 by the importing countries. Of the former Cuba has 10, the Netherlands (representing Java) 9, the U. S. S. R. 5, the British Dominions 5, France and Yugoslavia 4, other European exporters 11 and other cane exporters 11. Of the 45 votes exercised by the importing countries the United Kingdom and the United States have 17 each, India 6 and China 5. The Executive Committee shall consist of three representatives of cane-sugar producing countries, three of beet-sugar producing countries, and three of importing countries. Of the first Cuba and the Netherlands shall always make up two and of the last the United Kingdom and the United States. Rotations are established for the beet-sugar producing countries and for the third members of the other two groups. The Council held its first meeting on 5 July 1937, when a British chairman and a Cuban vice-chairman were elected for the first year of the Agreement.

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PRESENT TENDENCIES ON THE WORLD COTTON MARKET

SUMMARY. — Introduction. — The evolution of world production and trade. — The share of the three main classes of commodities in world trade. — The share of cotton in world trade. — World cotton production. — The evolution of cotton prices. — Relation between agricultural and industrial prices. — Cotton policy in the United States. — Cotton exports. — World cotton consumption. — The consumption of artificial fibres. — The Soil Conservation and Domestic Allotment Act. — The new trade agreements of the United States. — Conclusion.

INTRODUCTION.

In March 1937 the League of Nations set up a "Committee for the Study of the Problem of Raw Materials" with the purpose of bringing about an economic rapprochement between the raw material producing and consuming countries. This committee studied the problems of the exploitation of natural resources, export restrictions, difficulties connected with payment, exchange control, high tariffs, etc. It continued its labours in the months of June and September of this year.

Almost at the same time (in April 1937) the International Labour Office called, on the initiative of the United States, a "Technical Tripartite Conference on the Textile Industry" in which twenty-seven countries took part, which examined both the economic aspects of the problem—particularly competition on the world cotton market—and the social aspects, such as the forty-hour week in the textile industry.

Raw materials—including cotton—appear once more to engage international attention after having been to some extent shelved throughout the crisis years.

The International Institute of Agriculture, which had, already in 1934, begun to show an increased interest in (among other products) cotton, published at the end of 1936 an exhaustive survey on the subject entitled "World Cotton Production and Trade" to permit, in its own words, "the presentation of a general picture of the tendencies revealed by the trends of production and of markets under the sway of the economic policy of to-day."

In the present study we shall outline briefly the events which have struck the world cotton market and driven it off its traditional path, and shall endeavour to interpret their general significance.

I. — THE EVOLUTION OF WORLD PRODUCTION AND TRADE.

In order better to understand the position of cotton in the world economy we may sketch some general features of world production and trade in recent years.

TABLE I. — *World Production and Trade 1929-1936 (1).*

(1929 = 100).

	1930	1931	1932	1933	1934	1935	1936 (*)
World trade:							
Value	81.0	57.9	39.1	35.2	33.9	34.7	37.3
Volume	93.0	85.5	74.5	75.5	78.0	82.0	85.5
Prices	87.0	67.5	52.5	46.5	43.5	42.5	44.5
World production	88.4	79.1	69.0	77.7	84.0	95.4	110.5

(*) Excluding Spain.

As can be seen from the table, the value of world trade declined severely in the first years of the crisis 1929-1932 and reached its lowest level in 1934, at 33.9 per cent. In the succeeding two years, 1935 and 1936, the value of world trade rose, and in 1936 represented 37.3 per cent. of its value in the base year. As regards volume, world trade reached the lowest level—at 74.5 per cent.—in 1932, thus losing one quarter compared with 1929. In the following years, 1933-1936, the volume of trade showed a continuous rise and by 1936 it had reached 85.5 per cent. of the 1929 level. Prices showed a fall down to 1935, in which year they arrived at 42.5 per cent. of their 1929 level, rising however in 1936 to 44.5 per cent.

World production, like the volume of trade, reached its lowest point in 1932, at 69 per cent. of the level in the base year. After that it rose rapidly and in 1936 already exceeded by 10.6 per cent. the 1929 volume.

In consequence international trade—particularly if measured by value—was in 1936 appreciably behind world production. International transactions in goods have diminished with the diminution in international economic specialisation. For everywhere in the fields of national production and markets it is sought to bring about a completely controlled "totalitarian" economy and an independence as complete as possible from foreign countries.

(1) REVIEW OF WORLD TRADE. Geneva 1937, p. 10, and *Monthly Bulletin of Statistics*. League of Nations, No. 6, June 1937, p. 273.

2. — THE SHARE OF THE THREE MAIN CLASSES OF COMMODITIES IN WORLD TRADE.

Within the framework of the large contraction of the world market, international trade in each of the three main classes of goods, in gold values, has shown divergent movements both in relation to total world trade and to the trade in the other two classes, as may be seen from the following comparative figures (1).

TABLE II. — *Trade in the Three Main Groups of Commodities
as a Percentage of Total World Trade.*

	1929	1932	1933	1934	1935	1936
Foodstuffs	24.5	29	26.5	25	24.5	24
Materials, raw or partly manu- factured	36	33	36	37	37.5	38
Manufactured articles	39.5	38	37.5	38	38.0	38
Total	100	100	100	100	100	100

As emerges from the table, in 1929 the share of the first group—foodstuffs—in world trade equalled 25 per cent. of the total value. Subsequently, in 1932, at the deepest part of the depression when the total share of the other two classes—raw materials and manufactured articles—had been reduced to 4 per cent. less of the total, the share of foodstuffs rose to 29 per cent. of the total. With the development of the general tendency among the industrial countries to intensify their agricultural production and with the fall in world market prices of agricultural products the share of foodstuffs in world trade declined, to reach again in 1936 24 per cent.

As regards manufactured goods the decline in their share of world trade is more definite than that of foodstuffs. As a result of the industrialisation of the agricultural countries, and of the general economic crisis, their proportion fell from 39.5 per cent. in 1929 to 38 per cent. in 1934-1936, even though the prices of these articles, which are often under the control of cartels, have been maintained somewhat better than those of the first group.

Finally, the share of raw materials, which reached the lowest level, at 33 per cent. of the total in 1932, rose again in 1933 to its level in 1929 (36 per cent.) and continued to rise subsequently, reaching 38 per cent., or 2 points higher than in 1929, in 1936. The price level of this group in 1936 represented but 41.5 per cent. of the 1929 level, a level, that is, roughly equal to that of the food group—42.5 per cent. of the 1929 level. But as regards

the volume of trade in raw materials, this rose continually after 1932; in 1936 the world market absorbed 95.5 per cent. of the 1929 volume of raw materials, though total world trade represented in contrast only 82 per cent. of the 1929 volume.

These figures, which we do not intend to comment upon in detail in this context, show the changes in the relative importance in world trade of the three groups of merchandise in the period of depression and during the present economic recovery. Manufactured articles no longer hold, as in 1929, the most important position in world trade; instead, owing to the movement, observed throughout the world, towards economic autarchy, the raw materials class has now the largest share of world trade.

This phenomenon of an increasing importance of all kinds of raw materials, becomes even more evident when expressed in absolute, instead of relative, figures. The total world exports of the most important raw materials (cotton, wool, rubber, coal, mineral oils, petrol, copper, tin and tin ore) as well as of the most important foodstuffs (wheat, maize, sugar, butter, cheese, chilled and frozen meat, coffee and tea) were, in millions of former gold dollars, as follows:—

	1932	1934	1935
Total Raw Materials	1,477	1,520	1,541
Total Foodstuffs	1,514	1,149	1,078

As these figures show, the value of foodstuffs exports decreased by almost one third between 1932 and 1935 whilst that of raw material exports increased by 64 million gold dollars in the same period. Again, whilst in 1932 the value of exports of foodstuffs exceeded that of raw material exports by 37 million gold dollars, in 1935, by contrast, the value of raw material exports exceeded that of foodstuffs exports by 463 million gold dollars.

3. — THE SHARE OF COTTON IN WORLD TRADE.

Of the nine principal raw materials mentioned above, cotton occupies easily the leading place in world trade. The value of cotton exports in 1932 equalled, at an average price of 160.5 dollars per ton, 497 million gold dollars, or somewhat above a third (33.6 per cent.) of the value of the total exports of these nine raw materials. In 1934, at a slightly lower price of 159.5 gold dollars per ton, the total value of cotton exports fell to 444 million gold dollars and, in 1935, at an average price of 162.7 gold dollars, it rose to 468 million gold dollars, in that year representing somewhat less than one third (30.4 per cent.) of the total exports of the raw materials. In 1932 exports of coal, which amounted to 255 million gold dollars, held second place, whilst third place was occupied by another textile, wool, the value of the exports of which equalled 214 million gold dollars. In both 1934 and 1935 the value of coal exports fell to 211

million gold dollars, whilst that of wool exports rose to 272 and 264 million gold dollars respectively, thus taking second place in world raw material exports, coming immediately after cotton. The importance of the exports of the two textiles, cotton and wool, emerges from the fact that together they accounted for almost half of the total exports of principal raw materials, and represented a value of 732 million gold dollars in 1935.

Thus, just as raw materials have taken the first place in world trade in recent years, so cotton represents the largest item in the whole raw material trade. Of the total world trade in 1935, which amounted to 11,457 million gold dollars, cotton represented more than 4 per cent. compared with 2 per cent. in the case of wheat. These figures characterise sufficiently the position of cotton not only in relation to the other textiles but also in relation to the whole group of raw materials.

4. — WORLD COTTON PRODUCTION.

Having examined briefly the changes which have occurred in the relation of cotton to the other raw materials we shall now study in somewhat more detail the economic position of cotton itself on the world market as regards both supply and demand.

Turning first to world cotton production, this has developed at a rapidly increasing pace. In 1870, after the end of the American Civil War, world cotton production amounted to 6,416,000 bales (of 478 lbs.). Ten years later, in 1880, it had risen to 8,723,000 bales, an increase of 2.3 million bales, or 35.96 per cent. In 1890 world production equalled 12,479,000 bales, that is, nearly twice (194.5 per cent.) that of 1870. At the opening of the twentieth century, in 1900, there was a further increase, to 14,607,000 (227 per cent. of the 1870 production). During the twentieth century production continued to increase to an ever greater degree, reaching in 1910 19,930,000 bales (310.63 per cent. of 1870) and in 1914, at the beginning of the Great War, 25,049,000 bales (390.41 per cent.) or almost four times as great a quantity as in 1870.

During the war and immediate post-war years world cotton production declined, at times rather appreciably; in 1920 it fell to 20,348,000 bales (317.14 per cent.). Following upon the heavy damage caused by the boll-weevil in the United States, world production fell in 1921 to 15,240,000 bales (237 per cent.) thereafter rising without interruption to 26,647,000 bales (415.72 per cent.) in 1925, thus exceeding for the first time the 1914 volume of production. In the succeeding years (1926-1937) this quantity was only to be exceeded three times; in 1926 at 27,970,000 bales (435.94 per cent.), the highest level of production reached before the crisis, in 1936, in spite of the drought in America, when the figure rose to 29,751,000 bales (463.7 per cent.), and in 1937, at 37,073,000 bales (577.82 per cent.). Thus in a period of 68 years world production increased by more than five and a half times.

The following figures indicate the evolution of world cotton production since 1880 compared with the growth of world population.

TABLE III. — *World Population and World Cotton Production.*

Year	World population	As percentage of 1880	World cotton production	As percentage of 1880
1880 (1)	1,439,000,000	100	8,723,000	100
1900 (2)	1,543,000,000	107.23	14,607,000	167.45
1920 (3)	1,811,012,000	125.05	20,348,000	233.27
1934 (4)	2,066,201,000	143.59	22,873,000	262.21
1935 (4)	2,082,106,000	144.69	26,262,000	301.07

(1) ZISCHKA: *La guerre secrète pour le coton*. Paris, 1934, p. 208.

(2) HANDWÖRTERBUCH DER STAATSWISSENSCHAFTEN. IV. Ausgabe, 1924. Jena, 2er Band (Art.: Bevölkerungswesen).

(3) APERÇU DE LA DÉMOGRAPHIE DES DIVERS PAYS DU MONDE. Institut international de Statistique. La Haye, 1929, p. IV.

(4) INTERNATIONAL YEARBOOK OF AGRICULTURAL STATISTICS. International Institute of Agriculture. Rome, 1937, p. VIII.

As these figures show, world cotton production more than trebled between 1880 and 1935 whilst world population only increased one and a half times. Consequently, not only has the world become more rich in cotton but also the production of cotton per head has increased.

Table IV indicates world cotton production during the years preceding the crisis, during the crisis, and, during the period of recovery, as well as the changes which have occurred in the respective percentage shares of cotton production of the most important producing countries which account for 98-99 per cent. of world production.

As a first conclusion from this instructive table emerges the fact that world cotton production as a whole has in general always been greater than for the average of the pre-crisis years 1923-24—1927-28, with only the two exceptions of 1932-33 and 1934-35. In the last year, 1936-37, world cotton production reached the unprecedented figure of 66,855,000 quintals or 125.7 per cent. of the pre-crisis figure.

But the distribution between the various countries of this increased wealth has changed very considerably. The share of the United States in world cotton production has declined very appreciably, from almost 58 per cent. to only 40 per cent. of the total world cotton supply, a loss of 18 per cent. of that total.

The share in the world cotton market of India, which holds second place among the cotton producing countries, has also declined somewhat, except in 1935-1936 when her share in world production was equal, at 19 per cent., to that before the crisis. However there is a difference between the decline in the Indian supply and that of the United States in that, in India, after cotton production had reached its lowest level, in 1931-32, with 12.3 per cent. of the world total, the percentage subsequently rose continually, reaching 17 per cent. in 1936-37, the absolute production figures at the same time also increasing considerably.

China, and, especially, U. S. S. R., both increased their cotton production appreciably during this period, the percentage share of the first named country rising from 8 to 12.7 per cent., and of the second from 2.7 to 11.5 per

TABLE IV. — *World Cotton Production, in Thousands of Quintals, and Production of each Producing Country in Thousands of Quintals and as a Percentage of Total Production, in the Years of Depression and Recovery Compared with the Years Preceding the Crisis.*

Country	Average 1923-24/ 1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
United States . . .	30,704	31,391	32,143	30,206	37,066	28,189	28,289	20,894	23,066	26,858
%	57.72	54.98	56.88	54.65	62.86	55.42	50.01	41.80	41.43	40.17
India	10,324	10,491	9,513	9,478	7,270	8,450	9,268	8,812	10,765	11,443
%	19.44	18.38	16.84	17.15	12.33	16.61	16.38	17.63	19.33	17.12
China	4,287	5,344	4,587	5,326	3,869	4,902	5,911	6,775	4,925	8,486
%	8.06	9.36	8.12	9.64	6.56	9.64	10.45	13.55	8.84	12.69
U. S. S. R.	1,414	2,545	2,773	3,446	4,064	4,029	4,078	3,634	5,307	7,700
%	2.66	4.46	4.91	6.23	6.89	7.92	7.21	7.27	9.53	11.52
Egypt	3,191	3,625	3,833	3,718	2,856	2,227	3,853	3,394	3,835	4,244
%	6 —	6.35	6.18	6.73	4.84	4.38	6.81	6.79	6.89	6.35
Brazil	1,296	1,196	1,267	1,022	1,248	987	2,165	3,019	3,751	3,920
%	2.44	2.09	2.24	1.85	2.12	1.94	3.83	6.04	6.74	5.86
Peru	489	487	656	519	507	526	602	749	852	810
%	0.92	0.85	1.16	0.94	0.86	1.04	1.06	1.50	1.53	1.21
Argentina	184	287	312	346	367	325	434	640	810	529
%	0.39	0.50	0.55	0.63	0.62	0.64	0.77	1.28	1.45	0.74
Mexico	482	604	534	385	456	220	565	483	543	779
%	0.91	1.06	0.95	0.70	0.77	0.43	1 —	0.97	0.98	1.17
Uganda	281	370	234	343	376	535	518	459	590	600
%	0.53	0.65	0.41	0.62	0.64	1.05	0.92	0.92	1.06	0.90
Anglo-Egypt. Sudan	185	310	289	216	461	255	286	494	436	521
%	0.35	0.54	0.51	0.39	0.78	0.50	0.51	0.99	0.78	0.78
Turkey	193	246	218	160	197	61	284	352	522	625
%	0.36	0.43	0.39	0.29	0.34	0.12	0.50	0.70	0.94	0.93
Iran	160	199	147	102	229	155	312	278	280	340
%	0.30	0.35	0.26	0.18	0.39	0.31	0.55	0.56	0.50	0.51
Total production of countries shown .	53,190	57,095	56,506	55,267	58,966	50,861	56,565	49,983	55,682	66,855
As percentage of 1923-24/1927-28 .	100 —	107.34	106.23	103.90	110.86	95.62	106.34	93.97	104.68	125.69
Total world produc- tion	54,070	58,060	57,560	56,340	59,700	51,800	57,700	51,300	57,400	68,600

cent. during the years in question. Egypt, the larger producer in the world of the highest class, long staple cotton, increased her production both relatively and, to a noteworthy degree, absolutely, especially in 1932-33, when she produced 4.4 per cent of the world total, and subsequently, the percentage share rising to 6.4 per cent. in 1937.

In the three cotton-growing countries of South America, Brazil, Peru and Argentina, the increase in cotton production has been very marked, especially in the case of Brazil, the share of which, having represented 2.4 per cent. of world production before the crisis, has risen to 6 per cent., almost equal, therefore, to that of Egypt. The other countries enumerated in table IV—Mexico, Uganda, Anglo-Egyptian Sudan, Turkey and Iran—have all likewise increased their share in world cotton production.

Thus the structure of the world cotton market has undergone very important changes in regard to production, in that all the cotton growing countries, with the single exception of India, have extended their production at the expense of the United States.

Over a long period of years it had always been sought to lessen the dependence of the world textile industry on the American cotton market. Looking at the situation in its historical perspective it may be recalled that already at the time of the American Civil War, in which the industrial North fought against the agricultural South, the European textile industry had suddenly to face new problems, in having to procure its cotton supplies outside the traditional source. The severe disturbances caused by the struggle for the new agricultural and social constitution of the South of the United States, occasioned, about 1860-70, a new geographical distribution of cotton growing. But from 1870 onwards this crisis diminished considerably in severity, for the United States increasingly secured its dominant position in world cotton production, of which its share in 1880 reached 73 per cent.; in other words, the world textile industry then depended to the extent of three quarters of its purchases of its raw material on the United States. Even deducting the quantity of cotton consumed by the United States' own cotton industry—which at this time was the second largest in the world, coming immediately after the English industry—a quantity equalling in 1880 about 1.8 million bales, the remainder, about 4,557,000 bales, was destined for export and represented double the quantity of cotton produced by all the other countries outside the United States, which amounted to 2,366,000 bales. In consequence the world outside the United States was obliged to obtain two thirds of the cotton it consumed from the American market.

However, towards the end of the nineteenth century the ratio of United States cotton production to world production began to show a declining movement and in 1900 it represented 69.3 per cent., or 10,123,000 bales out of a world total of 14,607,000.

In the two last decades of the last century the share in production of cotton of countries other than the United States increased by 4 per cent. of the world total. Relatively speaking, that was not an important increase, but what was of significance was the tendency in the world economy to seek more and more for new sources of cotton outside the United States.

In the twentieth century this evolution of the world economy not only continued but was accentuated. The birth of new textile industries in many agricultural countries, the further development of the old industrial countries which produced cotton to a large degree for export, and the ever increasing absorption of the home production by the American cotton industry—which had in the meantime become the foremost textile industry in the world—all these factors had as a consequence not only the birth of new centres of cotton cultivation but also the dedication of greater attention to the older areas in which this textile fibre was cultivated.

The passionate search for raw materials in general and agricultural raw materials for industrial processing in particular, characterises the whole economic life of the peoples of the earth. In most recent times the struggle for raw materials and for the domination of textile fibre has become more intensive and the scene of the struggle has been extended to cover the whole surface of the earth.

The evolution of the world statistical position of cotton in the last twelve years, in absolute and relative figures, and the relative development of American cotton and outside growths may be seen from the following table.

TABLE V. — *World, American and Outside Cotton Production, (in Absolute and Relative Figures).*

Year	World production		American production			Outside growths		
	bales	as percentage of 1926	bales	as percentage of 1926	as percentage of world production	bales	as percentage of 1926	as percentage of world production
1926	27,970,000	100	18,162,000	100	64.93	9,808,000	100	35.07
1927	23,353,000	83.49	12,957,000	71.34	55.48	10,396,000	106 —	44.52
1928	25,611,000	91.57	14,555,000	80.14	56.83	11,056,000	112.72	43.17
1929	26,592,000	95.07	14,716,000	81.03	55.34	11,876,000	121.08	44.66
1930	25,259,000	90.31	13,873,000	76.38	54.92	11,386,000	116.09	45.08
1931	26,464,000	94.61	16,877,000	92.92	63.77	9,587,000	97.75	36.23
1932	23,613,000	84.42	12,961,000	71.36	54.89	10,652,000	108.60	45.11
1933	26,111,000	93.35	12,712,000	69.99	48.69	13,399,000	136.61	51.31
1934	22,873,000	81.78	9,576,000	52.73	41.87	13,297,000	135.57	58.13
1935	26,262,000	93.89	10,495,000	57.79	39.96	15,767,000	160.76	60.04
1936	29,751,000	106.37	12,396,000	68.25	41.67	17,355,000	176.95	58.33
1937 (prov.) . .	37,073,000	132.54	17,573,000	96.76	47.40	19,500,000	198.82	52.60

A glance at this table shows that the contraction of American cotton production was much more pronounced than that of world cotton production, especially in the years after 1933, after the United States intervened in the cotton market to raise prices and to diminish production. The American crop reached its smallest size in 1934, in which year it was still further diminished by drought, and was little more than half the size (52.73 per cent.) of the 1926 crop. In 1935 and 1936 and especially in 1937 production increased compared with 1934, representing respectively 58, 68 and 97 per cent. of the 1926 crop.

But during this same period the production of outside growths not only did not diminish—except in 1931 when it was about 2 per cent. below the 1926 level—but increased substantially, the production in 1937 representing 199 per cent. of that of 1926. It is only owing to this great progress in the production of outside cotton growths that it was possible to compensate for the heavy contraction of American cotton on the world market and that consequently the total volume of cotton in the world was not affected during all these years.

The relative pace of the production of American cotton and outside growths is shown characteristically by the development of production of the two sources measured against world production during the years in question. In 1926 American cotton represented 65 per cent. of world production and outside growths 35 per cent., American production being thus almost double that of the outside growths. In the following period the percentage of American cotton fell year by year, so much so that in 1933 the percentage of outside growths in world production already exceeded that of American cotton, the former being 51.2 and the latter 48.7 per cent. This tendency continued with the result that in 1935 outside growths accounted for somewhat more than 60 per cent. of world cotton production and American cotton for somewhat less than 40 per cent. For 1937 only provisional figures are at present available, but it appears that the fundamental position was the same as in 1935, though in the meantime an improvement in the position of American cotton may have taken place.

The relative importance of these two different sources has thus been radically changed in the last twelve years, a short period, indeed, but full of extraordinary events of great importance for the world economy. Whereas in 1926—as, indeed, in 1913—the quantity of American cotton was twice as large as that of all outside growths, in recent years the quantity of the latter entering the world cotton industry has been much greater than the quantity of the former.

But the position of American cotton on the world market is due, besides to the economic and historical causes which we have described, also to the agricultural policy, and particularly the cotton price maintenance policy pursued during the crisis by the United States. It would take us too far afield to go here into the details of these causes, and a brief consideration thereof we reserve until later: for a more detailed study we may refer to the Institute's "World Cotton Production and Trade" mentioned in the introduction.

5. — THE EVOLUTION OF COTTON PRICES.

The evolution of cotton prices, which reflects all the economic ups and downs of cotton on the world market was, during the period 1926 to 1937 of a very characteristic kind, as is demonstrated by the following figures.

During the last decade prices have fallen from their highest level of about 20 cents per lb. attained during 1927-28 and 1928-29—the high point of the prosperity period—to 6.3 cents in 1931-32, equal to less than a third of the pre-crisis prices.

TABLE VI. — *Prices of Middling Cotton, New York, 1926-1937.*
(in cents per lb.).

1926-27	15.15	1936 December (Average)	11.86
1927-28	20.42	1937 January (")	11.56
1928-29	19.73	" February (")	13.15
1929-30	16.60	" March (")	14.38
1930-31	10.38	" April (")	14.08
1931-32	6.34	" May (")	13.33
1932-33	7.37	" June (")	12.78
1933-34	11.09	" July (")	12.22
1934-35	12.44	" August (")	10.41
1935-36	11.75	" September (")	9.04
		" 15 October	8.56

With the slow recovery of the world economy prices rose in 1932-33 to 7.37 cents per lb., increasing thus by one cent. The rising movement continued in the following years with a pronounced tendency of prices to come back to the pre-crisis level. But there was the fundamental difference in the situation, in that, whereas the high prices in the earlier period coincided with a large production and consumption of American cotton, and the factors determining the simultaneous increase in prices and quantities lay in the whole world economy and the prosperity thereof, in the later period—in which the restrictionist policy of the United States was put into effect by the Agricultural Adjustment Act and reinforced by unfavourable atmospheric conditions such as the drought in 1934 and 1936—they resulted from the diminution of national cotton production and the increased world demand for cotton.

During the present year, Middling in New York in the month of March reached 14.38 cents per lb., *i. e.* a level which had not been reached since 1920-1930. Now, as we have already observed, according to provisional data the United States crop was very good in 1937, at 17,573,000 bales, whilst the production of outside growths in 1937 had also increased very considerably, reaching the particularly large figures of 19,500,000 bales. In consequence the price is now in decline, reaching on 15 October 1937 a level of 8.56 cents per lb., somewhat higher than in 1932-33.

The best way to grasp clearly the importance of this evolution of prices would be to analyse the movement of cotton prices over a long period. We may base our examination on Table VII, which indicates cotton prices over more than half a century—from 1872 to 1925.

TABLE VII. — *The Course of Cotton Prices 1872-1925.*
(in cents per lb.).

1872-73	20.13	1915-16	11.98
1875-76	12.95	1916-17	19.28
1880-81	11.42	1917-18	29.68
1885-86	9.41	1918-19	31.00
1890-91	9.19	1919-20	38.29
1894-95	6.44	1920-21	17.89
1895-96	8.13	1921-22	18.92
1898-99	6.00	1922-23	26.30
1900-901	9.25	1923-24	31.11
1905-06	11.25	1924-25	24.74
1910-11	14.56	1925-26	20.53

From the table it will be seen that one must look back over more than half a century of cotton history to find prices almost as high as during the prosperity years 1927-29, as far back indeed as 1872-73, when the painful consequences of the Civil War had worn off, and prices equalled 20.13 cents per lb. Subsequently, in the last thirty years of the nineteenth century, prices fell more and more, reaching 6.25 cents in 1897-98 and 6 cents in 1898-99—a price, that is, exactly as low as in the crisis year 1931-32. The fall in cotton prices at the end of the last century coincided in general with very large crops, which in the United States began for the first time to exceed 10 million bales: thus in 1894 the crop equalled 10,026,000 bales; in 1897, 10,985,000; in 1898, 11,435,000 bales (of 500 lbs.).

With the beginning of the present century the general tendency of prices was upwards until the war, for they rose at a moderate rate from a level of 9.25 cents per lb. in 1900 to one of 14.56 cents in 1910-11. Then, as production in the United States increased appreciably between 1911 and 1914 and in the latter year reached 16 million bales, the price fell again in the first year of the war to 9.10 cents per lb. in 1914-15. During the war years a new big rise in prices occurred which brought them up to 38.29 cents per lb. in 1919-20, probably the highest level of cotton prices recorded in the United States.

The crisis of the first post-war years had a depressing effect on prices, which fell in 1920-21 and 1921-22 to 17.89 and 18.92 cents per lb. respectively. The poor crop in the United States during the three years in which the boll weevil caused very serious damage occasioned a new rise in cotton prices to 26.30 cents per lb. in 1922-23 and even to 31.11 cents in 1932-34. The highest point in the price curve was in fact reached for the second time within the space of 6 to 7 years—though at a somewhat lower level.

Thus, as we have seen, the prosperity years closed in 1929-30 with a cotton price of 16.60 cents per lb., half, indeed, of the price in 1918-1919, but nevertheless higher than the 13.11 cents in 1913-14 on the eve of the war or still more than the 9.10 cents in the first year of the war. The price in 1929-30 represents the highest point of the cotton price curve from that date to the present.

One important fact which emerges from the rapid glance at the history of cotton prices in the last 65 years was that the price of 6.3 cents per lb., reached in 1931-32, the year of deepest economic depression, was lower than any price recorded in the first thirty years of the present century, a circumstance which had serious consequences on the economic situation of farmers.

6. — RELATION BETWEEN AGRICULTURAL AND INDUSTRIAL PRICES.

The difficult situation of cotton growers is revealed most strikingly by an examination of the relation between agricultural and industrial prices, the so-called "scissors," before and after the crisis. From the comparison in Table VIII it emerges that, from an absolute point of view, both indices,

agricultural and industrial alike, fell rapidly each year (except in 1929 as regards the agricultural index which rose in that year compared with 1928). But there was a fundamental difference in that the agricultural prices index had already in 1931 fallen appreciably below the pre-war level whilst the industrial level was still, in 1932, above the pre-war level. The consequence was that already in 1928 the relation between the index of agricultural prices and that of industrial prices was more unfavourable than before the war, or, in other words, from the period of prosperity onwards the prices which the farmer obtained for his products on the free market had fallen in relation to those he had to pay for industrial goods on a market protected by custom duties and tariffs—a circumstance which naturally could not fail to reduce the purchasing power of the farming population and the productive rhythm of industrial activity.

TABLE VIII. — *Relation between Agricultural and Industrial Prices.*

(August 1909-July 1914 = 100).

Year	Agricultural prices	Industrial prices	Ratio of agricultural to industrial prices
1928	139	153	91
1929	146	152	95
1930	126	145	87
1931	87	124	70
1932	65	107	61

This difference between the prices of agricultural and of industrial products had as a result that, for example, in 1931-32, though the production of cotton in the United States was greater than in 1927-28—14,898,271 bales compared with 14,443,934 bales—the returns from the sale of cotton were in 1932 only about one third of those in 1927-28, namely 457 million dollars against 1,440 million. It is well known that the American farmers sell their products, including cotton, on a free world market, unprotected by customs duties, whilst the American market for industrial articles has always been protected by high tariffs. In their capacity as producers, in selling their products, and in their capacity as consumers, in buying the manufactured goods of which they have need, the cotton farmers as a social class are thus seriously burdened compared with other groups of producers in the country.

7. — COTTON POLICY IN THE UNITED STATES.

The intervention of the American Government in the cotton market during the depression period, aiming at softening the effects of the crisis, was very active. Under the *Agricultural Marketing Act* there was set up, on 20 October 1929, a central body, the Federal Farm Board, for the purpose, *inter alia*, of maintaining cotton prices at a reasonable level by holding cotton stocks off the market.

Loans on cotton were granted, up to a certain price of cotton, to farmers, to enable them to refrain from precipitate selling. For the marketing of long staple cotton the Board acted through the *Staple Cotton Co-operative Association*, and, for short staple, through the *American Cotton Co-operative Association*. In each case there was guaranteed to the farmers, though to a different degree, a price for cotton which thus made them almost independent of cyclic fluctuations in the price of cotton on the world market.

The Federal Farm Board also made use of a whole series of other organisations such as the *Staple Cotton Discount Corporation* founded 5 June 1930 and the *Cotton Stabilisation Corporation*. All this superstructure of the Federal Farm Board had, however, to be abandoned after three years (1929-30 to 1931-32), for the goal which had been aimed at, namely, to maintain, in the midst of a general crisis, the price of cotton at a parity with the pre-war level, had been shown to be unattainable. During the third and last year of the activity of this organisation, the prices, as we have shown above, fell almost to one-third of their level in 1929-30.

Now, though the original aim was not given up, the means by which it was to be attained were developed further in that, from now on, the various parts of the cotton programme—raising of prices, granting of loans, market control—were no longer isolated one from the other and without strong cohesion, as under the free co-operative action of the Federal Farm Board, but instead, all formed part of one organic system. The policy embodied in the Agricultural Adjustment Act which was promulgated in May 1933 meant henceforward the direct intervention of the State in the United States cotton market. The action of the Government was directed more than in the past towards the reduction of the area under cultivation through legislation, and occasioned a reduction in such areas of more than 10 million acres. At the same time a money equivalent was paid to the cotton farmers for the areas withdrawn from cotton growing, that is, a cash payment calculated according to the average yield and varying between 7 and 20 dollars per acre, or instead, a cash payment plus a cotton option.

To finance this undertaking a processing tax of 4.2 cents per lb. net weight on all cotton consumed in the factories was introduced from 1 August 1933. But this programme too was to have but a transitory character in the United States cotton policy, for it was all too quickly shown that the reduction of the cotton planted area was not sufficient to prevent the obtaining of an ever increasingly larger yield per unit of land so long as the prices of cotton were sufficiently guaranteed. Thus the area under cotton in the United States declined from 45,341,000 acres in 1928-1929 to 35,939,000 acres in 1932-33, a diminution of 20.7 per cent., whilst the cotton crop in the corresponding years only fell from 14.6 to about 13 million bales, a diminution of hardly 11 per cent.; for at the same time the yield per acre increased from 153 to 173.3 pounds.

The development of cotton policy during the crisis was logically completed by the *Bankhead Act* published on 24 April 1934, by which was established a plan affecting cotton production itself, controlling the volume and fixing production quotas for the farmers. Taxes were imposed both on quantities of cotton produced and on quantities marketed in excess of the quantities fixed under the

law. The *Bankhead Act* thus changes the situation in that now, instead of the area under cultivation being controlled as thus far had been the case—whilst the farmer was in no way impeded from influencing the crop, employing more fertilizer, and recuperating thus through a higher yield what his contract in regard to area had obliged him to give up—the cotton crop was limited by the fixing of quotas.

As regards the raising of the price of cotton—the principal aim of the governmental intervention on the cotton market—a certain success was undoubtedly registered, for prices in 1934-35—as seen above—were almost twice as high (12.44 cents per lb.) as in 1931-32 (6.34 cents.). But to obtain this aim cotton production was placed too much in the background. The high level at which American cotton prices were maintained and, at the same time, the reduction of production, favoured the extension of cotton production to other zones of the world which profited considerably from the American cotton policy. In consequence, that which the American farmers gained from the artificial maintenance of prices on the domestic market they have at the same time lost by the shrinking of exports on the international market. Thus, as W. L. Clayton rightly says (1): "If the State of Texas with about 40 per cent. of the cotton acreage of the U. S., should attempt, irrespective of any action by the other twelve cotton states, to fix and maintain an artificial price for Texas cotton, all informed people would agree that such a course would end in failure. Yet the U. S. which occupies much the same relative position in the cotton world as Texas occupies in the cotton South, has been attempting since October 1929, to do just that. The technique employed has varied from time to time, but the thing attempted—the raising of the world price of cotton has remained always the same."

Here we touch upon a very important question of the cotton policy of the United States during the crisis years, namely just how far it is possible for one country to raise the price of a world export product, such as cotton, on the domestic market, without thereby doing itself damage on the world market and without threatening its vital interests to the benefit of other cotton growing countries. There is a point at which the result of the reduced volume of cotton exports can still be balanced by an artificially high cotton price. But once this critical point is passed, and the prices raised too much, the negative factor then becomes dominant—the demand of foreign markets and the value of the product sold diminish. This critical point in world economic development is not always easy to perceive, for the momentary temptation to raise prices prevents a correct appreciation of the succeeding results.

The cotton policy of the United States, which was designed, with the best will, to help the home farmer has not entirely achieved the desired results, for though the world seeks autarchy and all sorts of obstacles are consciously placed across the path of international trade, the economic ties between the various parts of the world are still too close for the achievement of an autonomous eco-

(1) CLAYTON, W. L.: *Our Vanishing Markets. The Cotton Crisis*. Institute of Public Affairs, Dallas (Texas) 1935, p. 25.

conomic policy to be possible in a particular domestic market without its eventual negative effects being felt on the world market.

For the 1937 cotton crop, once more it is to be tried to fix cotton prices by the granting of loans to farmers at the rate of 9 cents per lb. for Middling. But the price maintenance policy becomes more complicated in proportion as the share of American cotton on the world markets decreases and that of outside growths increases.

8. — COTTON EXPORTS.

We may now examine the movement of United States cotton exports in relation to average prices. The export situation is indicated in Table IX.

TABLE IX. — *United States Cotton Exports.*

(in thousands running bales, counting round as half bales, linters not included).

1927-28	7,639	1932-33	8,426
1928-29	8,053	1933-34	7,552
1929-30	6,697	1934-35	4,816
1930-31	6,820	1935-36	6,040
1931-32	8,754	1936-37	5,689

The evolution of exports shows, it will be seen, a rather wavy movement. What, at first sight, may seem strange, is that exports reached, at the deepest point of the crisis—in 1931-32—their highest level, at 8.8 million bales. Account however must be taken of the fact that the crop of that year had been very large, at almost 17 million bales. Prices were also, as we have seen above, lowest in this period (6.3 cents per lb.). At the same time American cotton stocks accumulated during the same year to more than 13 million bales, that is, the highest level they had ever reached, equal to a moderate to good American crop. Since 1928-29 stocks increased without interruption, rising from 4,517,000 bales in that year to 13,263,000 bales in 1931-32, whilst prices also fell. Since 1931-32 exports generally have declined whilst production has been very much reduced and stocks lower.

The cotton exports of the four principal cotton exporting countries were, during the last two commercial seasons, as follows (in thousands of bales):—

	1935-36	1936-37
United States	6,040	5,689
India	3,094	3,709
Egypt	1,695	1,828
Brazil	743	1,072
	<hr/> 11,572	<hr/> 12,298

Thus as can be seen from these figures the increase in total exports during 1936-37 is due entirely to the increases in Indian, Egyptian and Brazilian exports, whilst those of the United States declined.

The competitive capacity on the world market of the three principal cottons, American, Indian and Egyptian, is determined by the relative movements of their prices, as may be seen from Table X, in which prices are given in pence per lb. and as a percentage of Middling prices, at Liverpool.

TABLE X. — *American, Egyptian and Indian Cotton Prices on the World Market and their World Market Relationship 1927-1937.*

Year	Middling pence per lb.	Percentage on middling	Egyptian Sakellaridis pence per lb.	Percentage on middling	Indian Broach (f. g.) pence per lb.	Percentage on middling
1927	9.54	100	16.84	176.52	8.26	86.58
1928	10.92	100	19.27	176.46	9.22	84.43
1929	10.29	100	17.02	165.40	8.37	81.34
1930	7.49	100	12.05	160.88	5.26	70.23
1931	5.10	100	7.81	153.14	4.15	81.37
1932	5.24	100	7.25	138.36	4.85	92.56
1933	5.55	100	7.55	136.04	4.67	84.14
1934	6.68	100	8.61	128.89	5.04	75.44
1935	6.70	100	8.65	129.10	5.71	85.22
1936	6.70	100	9.97	148.81	5.41	80.75
1937 January . .	7.20	100	10.26	142.50	5.78	80.88
» February . .	7.30	100	10.00	136.99	5.68	77.81
» March	7.87	100	11.76	149.43	6.01	76.37
» April	7.60	100	12.05	158.55	6.07	79.87
» May	7.30	100	11.30	154.79	5.99	82.05
» June	7.06	100	10.54	149.29	5.94	84.14
» July	6.68	100	9.72	145.51	5.61	83.98
» August	5.88	100	9.22	156.80	4.99	84.86
» September . .	5.36	100	8.77	163.62	4.47	83.40

From this table it may first be noted that in 1927, putting the price of middling at Liverpool equal to 100, the price of Indian cotton equalled 86.6 and of Egyptian 176.5. This relationship changed in the years immediately following, but the general tendency was to maintain a lower, more favourable ratio, of Indian and Egyptian cotton prices to middling; in other words, these two cotton sorts became relatively cheaper and more capable of competing with American cotton than before the crisis. The ultimate result was that in 1934, in the period of the Agricultural Adjustment Act policy, the price of Indian cotton represented only 75.4 per cent., and of Egyptian cotton, 129 per cent. of that of American Cotton. Other economic factors remaining equal, this difference in prices rendered these two outside growths more attractive on the world market than American cotton. This price movement contributed much to the losses sustained by American cotton in foreign markets.

With the abolition of the policy of the Agricultural Adjustment Act the ratio between the prices of American cotton and outside growths improved, that is, American cotton became relatively cheaper than the other cottons and in consequence more capable of meeting competition on the world market, though by September 1937 the pre-crisis position had not been reached.

9. — WORLD COTTON CONSUMPTION.

If the United States cotton price policy in the first place strongly stimulated the production and export of cotton of all the other cotton growing countries, their commercial policy, in turn, tended further to turn the cotton importing countries away from America and towards them. The structure of American foreign trade is generally characterised by an active commercial balance. The amount by which exports exceed imports has fluctuated between averages of about 500 million dollars in the pre-war years, about 1,000 million in 1924-28, 500 million again in 1934 and 250 million in 1935, but the balance has always been active, as it was before the war, when the United States was a debtor country which required an export surplus in order to maintain its balance of payments in equilibrium. As, however, is well known, the international credit position of the United States has radically changed. At the beginning of the Great War the United States owed the rest of the world about 2,700 million dollars. After the war the position changed radically in that from a debtor country the United States became a creditor country, to which the world owed in all, in 1919, more than 14,000 million dollars. In 1928, immediately before the world crisis, foreign debts to America reached to more than 16,000 million dollars (1).

The effects of the traditional American high tariff commercial policy, and of the new agricultural policy designed to maintain artificially high prices, combined with the ideology, which has been carried over from the pre-war years, of a debtor country, have been to prejudice the foreign trade of the United States in that foreign countries have had diminished the only possibility of paying for American exports. Thus as the United States Minister of Agriculture says "The problem is not of American cotton but of American dollars in the hand of those foreign nations which want cotton (2)."

With the aid of the table below, which gives both total world consumption of all cotton and total world consumption of American cotton and outside growths, we may examine the changes which have occurred in the last ten years in cotton consumption on the world market.

This table shows firstly that during the years 1930-31 and 1931-32 total world cotton consumption declined considerably and that world consumption in 1930-31 represented 87.88 per cent., and in 1931-32 90.05 per cent. of consumption in 1927-28. In the succeeding years an increase of surprising rapidity may be observed, as if the world wanted to make up in cotton consumption as quickly as possible for its neglect during the crisis. In the last two years 1935-36 and 1936-37 (provisional figures) world cotton consumption reached an even larger figure than in the period of prosperity, reaching in fact 109.13 and 121.61 per cent. respectively of the volume in 1927-28, with the difference

(1) AGRICULTURE'S INTEREST IN AMERICA'S WORLD TRADE, Agricultural Adjustment Administration, Department of Agriculture, Washington, 1935, pp. 10-11.

(2) HENRY A. WALLACE. *The World Cotton Drama*. In *Foreign Affairs*. Vol. 13, July 1935, No. 4, p. 554.

TABLE XI. — *World Consumption of American Cotton and Outside Cotton Growths 1927-28—1936-37. (Bales of 478 lbs.).*

	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
American cotton (1000 bales) . . .	15,576	15,226	13,021	11,113	12,528	14,385	13,780	11,206	12,539	13,100
As percentage of world total . . .	61	60	52.45	49.77	54.75	58.36	53.67	44.07	45	42.39
Outside growths (1000 bales) . . .	9,832	10,577	11,805	11,216	10,353	10,265	11,897	14,119	15,190	17,800
As percentage of world total . . .	39	40	47.55	50.23	45.25	41.64	46.33	55.93	55.00	57.61
Total (1000 bales). .	25,408	25,803	24,826	22,329	22,881	24,650	25,677	25,325	27,729	30,900
As percentage of total 1927-28 . .	100	101.55	97.71	87.88	90.05	97.02	101.06	99.67	109.13	121.61

however that whereas before the crisis the largest proportion of cotton, often more than 60 per cent., had been bought in the United States and subsequently manufactured, now a larger proportion of Indian, Egyptian, Brazilian, Argentine cotton, etc., is used. And this, in spite of the fact that for more than a century the European cotton industry has been organised for the purchase and consumption of American cotton—on both the technical and economic sides—and that the American cotton trade has been and is assisted in our days by the American commercial system and its excellent organisation. But the explanation of this apparently strange phenomenon lies, we may repeat, in the traditional commercial policy of the United States which does not suit its now predominant position in the world economy or its great importance on the world credit market.

If we study in detail the consumption of cotton in the various countries and continents, as in Table XII, we are at once struck by the fact that consumption in 1935-36 in the United States was still below the level reached before the crisis. That is due partly to the N. R. A. and the processing tax on cotton used in United States mills. From 1 January 1933 until 2 February 1936 this tax of 4.2 cents per lb. on raw cotton, as it emerges from the bale, equivalent to 4.5 cents for pure cotton, was calculated in the price of cotton. According to Mr. Alston H. Garside (1), the manufacture and sale of a standard print cloth cost on the average 14 cents per lb. over the price of cotton. Now there were added the tax of 4.5 cents and a little more than 8 cents for the increase in wages and reductions in working hours, under the provision of N. R. A.—in consequence 12.5 cents, raising the total to almost double what it was before, without counting the fact that cotton too had become more expensive.

(1) GARSIDE, ALSTON H. Cotton Year Book of the New York Cotton Exchange, 1935, p. 5.

TABLE XII. — *World Cotton Consumption and the Share of American therein, by Countries and Continents.*
(thousands of bales of 478 lbs.).

Pays	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36
United States . .	6,834	7,091	6,106	5,263	4,866	6,137	5,700	5,361	6,351
Great Britain . .	3,097	3,074	2,587	2,019	2,576	2,392	2,659	2,616	2,821
	1,942	1,936	1,390	944	1,323	1,365	1,403	941	1,295
%	62.71	62.98	53.73	46.75	51.36	57.06	52.76	35.97	45.91
U. S. S. R. . . .	1,711	1,681	1,770	1,720	1,813	1,838	1,965	1,975	2,351
	506	389	290	80	...	...	80	36	89
%	29.57	23.14	16.38	4.65	...	...	4.07	1.82	3.78
France	1,221	1,250	1,220	1,680	941	1,154	1,182	1,028	1,270
	851	820	746	738	599	808	781	535	660
%	69.70	65.60	61.15	43.93	63.66	70.02	66.07	52.04	51.97
Germany	1,618	1,376	1,352	1,120	1,260	1,282	1,597	944	1,143
	1,310	1,020	947	748	906	973	1,099	376	390
%	80.96	74.13	70.04	66.68	71.90	75.90	68.82	39.83	34.12
Italy	968	1,036	1,010	796	822	902	905	806	628
	725	741	681	495	587	714	663	460	425
%	74.90	71.52	67.42	62.18	71.41	79.16	73.26	57.07	67.68
Czechoslovakia .	559	493	404	405	362	303	312	291	407
	445	375	329	284	279	247	227	180	242
%	79.61	76.06	70.90	70.12	77.07	81.52	72.76	61.85	59.46
Belgium	408	430	445	342	292	297	269	338	411
	221	217	184	141	152	172	155	122	150
%	54.17	50.46	41.35	41.23	52.05	57.91	57.62	36.09	36.50
Spain	422	404	424	416	431	413	443	432	368
	322	289	259	242	299	308	314	248	200
%	76.30	71.53	61.08	58.17	69.37	74.57	70.88	57.41	54.35
Poland	370	254	232	231	206	274	296	283	304
	327	208	189	183	174	240	237	204	217
%	88.38	81.89	81.47	79.22	84.46	87.59	80.07	72.08	71.38
Holland	181	185	204	197	155	158	176	188	234
	151	151	156	148	128	133	130	79	81
%	83.42	81.62	76.47	75.13	82.58	84.18	73.86	42.02	34.61
Total Continent .	8,181	7,881	7,884	7,060	6,968	7,342	8,107	7,195	8,177
	5,353	4,707	4,227	3,440	3,556	4,079	4,230	2,739	2,963
%	65.47	59.73	53.61	48.72	51.03	55.56	52.76	38.07	36.24
Japan	2,578	2,797	2,875	2,482	2,729	2,934	3,289	3,622	3,554
	1,078	1,198	1,095	962	1,623	1,847	1,857	1,737	1,655
%	41.81	42.83	38.09	38.76	59.47	62.95	56.46	47.96	46.57
China	1,988	1,982	2,270	2,334	2,228	2,575	2,404	2,495	2,392
	268	403	292	362	883	748	423	256	104
%	13.48	15.34	12.86	15.50	39.63	29.02	17.59	10.26	4.34
India	1,664	1,637	2,063	2,044	2,287	2,249	2,137	2,464	2,477
Total Orient . .	6,358	6,643	7,432	7,103	7,494	7,908	8,135	8,957	8,786
	1,497	1,535	1,397	1,384	2,696	2,701	2,321	2,032	1,793
%	23.55	23.11	18.80	19.48	35.98	34.15	28.53	22.68	20.41
Total Various . .	972	1,089	866	982	977	871	1,166	1,299	1,594
	249	270	204	204	209	236	273	253	267
%	25.62	24.79	23.56	20.77	21.39	27.09	23.41	19.48	16.75
Total World . .	25,442	25,778	24,875	22,427	22,881	24,650	25,677	25,428	27,729
	15,576	15,226	13,021	11,056	12,528	14,385	13,780	11,206	12,539
%	61.22	59.07	52.35	49.30	54.75	58.36	53.67	44.07	45.22

For each country the first line indicates the total consumption of cotton, the second the consumption of American cotton and the third the consumption of American cotton as a percentage of the total.

But the rendering of cotton thus expensive diminished its industrial consumption, for the margin between the price of cotton goods and of cotton shrunk too far. Thus the price of middling spot cotton developed as follows on the ten southern markets of the United States.

Price of Cotton (in cents per lb.)

Year	Excluding processing tax	Including processing tax
1933-34	10.81	15.01 (+ 4.2)
1934-35	12.36	16.56 (+ 4.2)
1935 - August	11.37	15.57 (+ 4.2)

The margin equalled 21.23 cents per lb. for 4 yarns on 4 August 1933 (1) and fell down to 7.70 cents by 5 July 1935. That was hardly the best means of stimulating the expansion of the industrial consumption of American cotton in the United States; it acted indeed rather as a direct obstacle to such consumption.

Examining now, on the basis of Table XII, the percentage of the cotton consumption of the various countries represented by American cotton, we come across the same phenomenon. Everywhere there is a downward movement, both absolute and relative, in the consumption of American cotton, especially up to 1934-35, the last year in which the Agricultural Adjustment Act was fully effective. In 1935-36 an increase in the consumption of American cotton was observable in the world in general and particularly in France, Czechoslovakia, Poland and the Netherlands. Similarly an increase took place in the United States itself. But though in 1935-36 the consumption of cotton from all sources had already attained in Europe the level of 1927-28—8,177,000 compared with 8,181,000 bales—the figure for American cotton consumption in European countries was hardly half as large as in 1927-28—2,963,000 as against 5,353,000 bales, or 36.24 and 65.47 per cent. respectively, of the total European cotton consumption in those years.

The situation in Asia, and particularly in Japan, is somewhat different. In 1927-28 Japan consumed 2,578,000 bales of cotton from all sources, representing 10.15 per cent. of the total world consumption. Consumption then increased almost uninterruptedly, reaching 3,622,000 in 1934-35—representing 14.24 per cent. of the world total, falling however thereafter to 3,554,000 bales, or 12.8 per cent., in 1936-36. The industrialisation of Japan which had already been favourably influenced by the Great War and which had caused an increase in the consumption of domestic as well as of imported cotton was further stimulated by the world crisis—however paradoxical that may seem at first sight. The cotton industry is the greatest Japanese industry and since some years it has become the largest in the world after that of the United States.

Thus in recent times world cotton supply and demand have not only been spatially extended but also transformed. The cotton market has assumed rather a piecemeal structure and has lost much of the clearness of line which it had before the war, and has become much more complicated.

If exception is made of the International Federation of Master Cotton Spinners and Manufacturers' Associations (Manchester) which brings together the spinners and weavers of the whole world outside the United States, there does not yet exist an organisation in the world cotton market of the type of the "International Cotton Institute" proposed in the *Cotton Trade Journal*, "an organisation, actively furthering the world's farflung cotton industry, devoted primarily to cotton in all the phases, from growers of the raw material to the ultimate consumer" (1).

Another proposal of this kind, aiming at bringing the world's producers of cotton and the textile industries together for economic collaboration, was made at the International Textile Conference held at Washington on 2 April 1937, where the Indian delegate raised the question of the desirability of creating an international cotton committee in order to be able to regulate both the supply and prices of cotton in the world market.

Even though the world economic structure is not "planned" throughout it is (including the cotton market) pervaded by a spirit of economic recovery and its pulse beats faster. Most probably this is due to the rise and the fall of the economic barometer which occurs regularly and periodically, the present rise following a period of decline; in part however it has been favoured by the rearmament boom throughout the world. It is significant that in opening the discussions of the Committee for the study of the problem of raw materials to which reference has already been made in the introduction, the Secretary General of the League of Nations pointed out that the present growing importance of raw materials is probably related to "the check to the Disarmament Conference and the consequences of that check."

10. — THE CONSUMPTION OF ARTIFICIAL FIBRES.

By reducing—as we have shown above—the industrial consumption of cotton in the United States the processing tax contributed indirectly at the same time to bringing about an increase in the consumption of other textile fibres such as silk, wool, rayon, flax, sisal and others not subjected to taxes of that kind.

The evolution of the consumption of the four most important textile fibres—cotton, wool, silk and rayon in the United States—from 1920 to 1936 inclusive, may be seen from Table XIII.

It may first be noted that the total consumption of the four textile fibres had increased from 3,180.3 million lbs. in 1920 to 4,135.6 million in 1927. Thereafter it in general declined, reaching the lowest level in 1932, at 2,919.6 million lbs. From 1933 to 1936 consumption increased considerably, reaching 4,233.4 million lbs. in the latter year. The lion's share went naturally to the king

(1) The *Cotton Trade Journal*, International Edition, New Orleans, 1937, pp. 14-15.

TABLE XIII. — *Annual Fibre Consumption in the United States.*
(in millions of pounds and percentages).

Year	Cotton	Wool	Silk	Rayon	Total
1920	2,828.1	314.2	29.3	8.7	3,180.3
%	88.9	9.9	0.9	0.3	100
1925	3,074.7	349.9	66.0	58.3	3,548.9
%	86.6	9.9	1.9	1.6	100
1926	3,214.8	342.7	65.9	60.6	3,684.0
%	87.3	9.3	1.8	1.6	100
1927	3,609.5	454.1	72.0	100.0	4,135.6
%	83.3	8.6	1.7	2.4	100
1928	3,184.8	333.2	74.9	100.5	3,693.4
%	86.3	9.0	2.0	2.7	100
1929	3,422.7	368.1	81.3	133.4	4,005.5
%	85.5	9.2	2.0	3.3	100
1930	2,610.9	263.2	76.0	118.8	3,068.9
%	85.0	8.6	2.5	3.9	100
1931	2,656.6	311.0	77.3	158.9	3,203.8
%	83.0	9.7	2.4	4.9	100
1932	2,463.3	230.1	70.9	155.3	2,919.6
%	84.5	7.8	2.4	5.3	100
1933	3,052.5	317.1	59.8	217.3	3,646.7
%	83.8	8.7	1.6	5.9	100
1934	2,655.4	229.7	58.5	197.2	3,140.8
%	84.5	7.3	1.9	6.3	100
1935	2,754.8	402.5	62.4	259.3	3,479.0
%	79.2	11.6	1.8	7.4	100
1936	3,468.0	384.5	57.9	323.0	4,233.4
%	81.9	9.1	1.4	7.6	100

of the textile materials, cotton, the consumption of which, in absolute figures, increased quite appreciably from 2,828.1 million lbs in 1920 to 3,468 million in 1936. But the relative share of cotton in the total consumption of the textile materials declined considerably, from nearly 89 per cent. in 1920 to almost 79 per cent. in 1935, a loss thus of 10 per cent. in the total. In consequence of the trends in the general economic situation, and in part also of the abolition of the processing tax, cotton consumption increased in 1936 to 82 per cent. of the total consumption. Compared with 1920 however the share of cotton represented 7 per cent. less of the total consumption of the textile fibres.

The percentage of wool in the total consumption of fibres in the United States—the country whose consumption of wool is largest and whose production is second to that of Australia—shows a slight downward tendency, from 9.9 per cent. in 1920 to 9.1 per cent. in 1936. It was at the highest in 1922, at 12 per cent. and lowest in 1934 with 7.3 per cent.

Silk consumption, which represented 0.9 per cent. in 1920, increased to 2.5 per cent. in 1930, to fall with fluctuations in the following years, reaching 1.4 per cent. in 1936, a figure which represents however an increase of 0.5 per cent. in the total, compared with 1929. The United States consumes in general 70 per

cent. of the world silk production, and imports from Japan—the largest silk producing country—alone about 75 per cent. of that country's production.

The only one of these fibres to gain substantially was rayon, a late arrival in the textile industry. In 1920 the percentage of rayon in the total fibre consumption was the lowest of all the other fibres—0.3 per cent. In 1927 the share already exceeded, at 2.4 per cent., that of silk, the consumption of which had also meanwhile increased though only arriving at 1.7 per cent. in that year. In 1930 the percentage of silk reached its maximum at 2.5 per cent., falling, as we have noted, thereafter, whereas the percentage share of rayon continued to rise without interruption to reach the highest point in 1936, at 7.6 per cent. Thus from 1920 to 1936 the share of rayon increased by 7.3 per cent. of the total, an increase exceeding the decrease of the share of cotton. Rayon, which competes with wool and silk as well as with long-staple cotton and affords vast sections of the population a luxury article has thus made enormous progress, especially when it is considered that in 1911 its production in the United States was only 364,000 lbs.

The consumption of synthetic fibre was developed considerably, not only in the United States but also particularly in the countries which are poor in raw materials, especially in Italy, Germany, Japan, etc.

According to the annual report of the *Snia Viscosa* (*Società Nazionale Industrie Applicazione Viscosa*), which has its headquarters in Turin, the quantity of artificial silk yarn (rayon in continuous filament) produced in Italy in 1936 equalled 40 million kilogrammes, and of rayon staple fibre 50 million kilogrammes. Beyond this the first successes have been registered in the production of wool from casein (lanital).

Imports of wool amount to between 40 and 50 million kilogrammes annually with a value of between 600 and 700 million lire. The wool industry at present only consumes 4.5 million kilogrammes of synthetic fibre, thereby one third of the raw material of the cotton industry and about one tenth of that of the wool industry being provided. But these proportions can be appreciably increased. During the last six years the total production of synthetic fibres has increased three-fold. In 1936 the value thereof reached 750 million lire, representing about 10 per cent. of all Italian imports (1).

It is well known that in Germany during the war as result of the raw material scarcity, synthetic fibre was invented and given the name "Stapelfaser" (staple fibre). But after the war it quickly went out of manufacture for it had important defects. In 1922 under the name "Vistra" another similar synthetic fibre was manufactured which for strength and fineness was much superior to the earlier "Stapelfaser." Today it is often given the name of "Zellwolle," and is manufactured from cellulose. According to Dr. van Delden (2) it should be possible to replace, by this fibre, 25 per cent. of cotton imports in 1936, 35-40 per cent. in 1937, whilst he predicted the replacement of the whole of cotton

(1) MARINETTI FRANCO: *L'industria italiana delle fibre tessili artificiali e il suo contributo all'indipendenza economica della Nazione*. Milano, 1936, p. 9.

(2) DELDEN, Dr. van. Wood Supplants Cotton. *Cotton Trade Journal*, 1937, pp. 91 and 238.

imports by 1940. The same author however added "But it has been stated that Germany would scrap the whole work and forget all about it if she could get American cotton by barter." But the present day economic programme is to make "Zellwolle" the raw material *par excellence* for the national textile industry.

World rayon production has risen from 200,000,000 kg. in 1930 to 450,000,000 in 1936 and that of "Zellwolle" or rayon staple from 350,000 to 121,000,000 kg., so that the production of artificial fibres has increased from 200,350,000 to 571,000,000 kg., of which Italian and German production represent about 70 per cent. (1).

In Japan the production of rayon in 1936 equalled 276,000,000 lbs, exceeding that of 1935 by 26 per cent. The production of rayon now exceeds that of the United States. Exports also have grown. In 1936 Japan exported rayon cloth to a value of 113,484,000 yen, mostly to British India. At present experiments are being made to obtain a new textile fibre "Sugano" which grows in Japanese waters.

In many other countries also, as, for example, England, where rayon production reached 12,800,000 kg. in 1936, in France, Poland, Romania, Yugoslavia, Hungary, Argentina, etc., production of the artificial textile materials is increasing more and more. The upward tendency in the consumption of artificial fibres and its influence on the situation of cotton in the world textile economics is amusingly described by Mr. J. E. Edmonds (2) in the following terms: "Once-upon-a-time, 'King Cotton' lived in the American Cotton South. He was an American citizen. The 'King could do no wrong' and his ministers, the American cotton producers, dominating world markets and furnishing the greater part of what the world consumed, thought they couldn't do anything wrong either. He was a *Producer*, if you understand what I mean. Times have changed.

"King Cotton is a *Consumer* now, a personification of the combined power of hundreds of millions of cotton-users, in all the continents, making their will felt through the spinners of *Britain, Japan, Central Europe* and the rest. A King who, annoyed, has turned to *synthetic fibres* for clothing equivalent to the use of two million bales of cotton in one year."

Whither this way leads and in what degree the traditional textile materials, particularly cotton, will be replaced by synthetic fibres are questions which cannot yet be answered definitely. But the general direction in view of the tendency throughout the world towards economic autarchy is towards an increase in the production and consumption of the artificial fibres. At bottom it is a question of technique, of the perfecting of the production process of these fibres, which goes together with the economic question, that of reducing production costs; both these problems are problems of which the solution is favoured by the economic difficulties of the time. Shall we see in this field the same developments as in the cases of synthetic nitrates or artificial rubber? That prospect

(1) *Berliner Tageblatt*. 8 May 1937.

(2) EDMONDS J. E. American cotton—soil to spinner. *Cotton Trade Journal*, International Edition, 1937, p. 16.

may still seem perhaps rather remote but from now on any rational economic policy for cotton must reckon with these future possibilities and appreciate them sufficiently in advance at their true worth.

II. — THE SOIL CONSERVATION AND DOMESTIC ALLOTMENT ACT.

The changes which occurred in the agricultural and cotton policy of the United States with the abolition, in January 1936, of the Agricultural Adjustment Act was of great importance for the world cotton market. *The Soil Conservation and Domestic Allotment Act* which in part took its place coincided in publication with an upward movement in the American and world cotton markets. This law aims at replacing the palliative measures, which had been adopted during the crisis for the valorisation of the agricultural land, by radical measures designed to protect the soil itself—the most important national property—from natural wastage and destruction.

The fundamental idea of the new agrarian legislation is the conservation of agricultural land and its fertility. So long as the cultivable area of land in the United States could always be extended the Americans, sure of the unlimited expanse of the Union territories, did not give much attention to erosion and the slow loss of soil fertility, for new fields could always be put under cultivation without worrying about exhausted fields. Forest areas have also been at the same time deforested by the timber industry without provision being made for a rational reafforestation, with the result that of the original forests of the Union only one tenth remains. Deforested areas however are specially prone to devastation by erosion, whether through weathering or by surface runoff.

On the other hand, the exaggerated single crop farming, whether of cereals, cotton or other products, causes excessive exhaustion in various regions of the resources and fertility of the soil. As a result of erosion and single crop farming about one half of the original fertility of the American soil has been lost. This problem had already made itself felt after the Civil War but it is only since the great wastage from erosion and the great dust storms of 1936, which caused thousands of millions of dollars damage, that the problem assumed a nationwide character.

In the North of the United States where livestock rearing predominates, the situation is better, whereas in the cereal and cotton belts it is definitely worse. It is calculated that of the 1,000,000,000 acres of cultivable land in the United States, 300,000,000 or 30 per cent. have already been seriously damaged by erosion. It is this situation which the new law seeks to remedy, the new plan aiming above all to (1) conserve soil resources, (2) protect rivers and harvests against the results of soil erosion in aid of maintaining navigability and in aid of flood control, and (3) re-establish and maintain the pre-war ratio between the per capita purchasing power of farm and non farm income.

The Soil Conservation Act thus, like the old Agricultural Adjustment Act, aims at the control of agricultural production through the partial transference from commercial crops, such as cotton, wheat, tobacco, etc., to non commercial crops—grasses, vegetables, etc., which maintain soil fertility. But

the ultimate purpose which it is proposed to achieve differs somewhat from that of the Agricultural Adjustment Act; in the latter the principal aim was the control of production in order to re-attain the pre-war parity of prices, whilst the improvement of the soil was only a secondary aim. In the new Act the improvement of the soil has become the most important question for the whole nation, though agricultural prices have not been left out of sight.

The transference of land to soil conservation crops is not compulsory and farmers who do it voluntarily are compensated. For cotton the indemnity is fixed at 10 dollars per acre calculated on the basis of average yields of 185 lbs. of cotton per acre withdrawn from cotton production. 500 million dollars annually is the sum fixed for the financing of this programme. The relation between the expenditure for this financing and the national income is described officially as follows: "The half billion dollars expected to be appropriated annually under the Soil Conservation and Domestic Allotment Act of 1936 is the equivalent of one-half to 1 per cent. of the national income for a single year, which ranges from 50 billions in depression to 100 billions in prosperity. It is equivalent, moreover, to 5 per cent. of the value of the 200 million acres of eroding land, assuming that such land has an average value of \$50 per acre. And it is at least doubtful that the value is this great." (1)

The conservation of the soil however is not only a technical agricultural problem, but also an eminent question of the social economics of American agriculture, especially in regard to the land tenure system. The system, so wide spread in the United States, of tenancy, for a period often lasting only one year and under which the holding may change hands each year, is a factor which tends to deteriorate seriously the quality of the land. The farmer naturally is interested in obtaining the largest return possible in the short period of the lease without worrying about the condition of the soil when he leaves the farm at the termination of the contract. Between 1880 and 1930 the percentage of tenancy farms increased from 25.6 to 42.4 of all American farms. Only in the agricultural census of 1935 did a slight decline, to 42.1 per cent. appear. In 1935, 34.2 per cent. of all farmers worked their farms for less than 1 year, 13.1 per cent. held a tenancy lease for one year only, 24.1 per cent. for two to four years, 14.7 per cent. from six to nine years, 6.8 per cent. from six to fourteen years and, finally, 7.1 per cent. had held their farms for more than fifteen years. Under this system the farmer becomes a kind of nomad.

In general the farmer receives no compensation for any improvements he may introduce on the farm, consequently it is only too easily seen that the land serves a speculative purpose and that it is not well cared for. It is interesting to note thereon the recently expressed opinion of the Secretary of State for Agriculture, Henry A. Wallace: "Throughout our history we have tried to help our people settle and stay settled on the land. Public land has not only been sold at nominal prices, it has been given away, millions and millions of acres of it.

(1) SOIL CONSERVATION. ITS PLACE IN NATIONAL AGRICULTURAL POLICY. United States Department of Agriculture, A. A. A., Washington, D. C. 1936.

And still tenancy has increased, farming by owners has decreased, and the debt burden has mounted. If gifts of land did not seem to check tenancy and promote ownership by operators, can we be any more confident that the sale of land, even at extremely favourable terms, will be an adequate answer to our problem?... The problem is of such magnitude that many other approaches besides mere purchase and sale must be found, if any appreciable improvement in the situation is to result." And after having described the measures to be taken for the purchase of cultivated lands in the region of the great plains in nine States in order that these lands might be transformed into pasture lands, which will prevent soil-erosion, he concluded with the following significant words: "Agriculture is no longer the forgotten industry in the United States."

And, in consequence, this is the case too in the cotton economy of the United States, the importance of which is indicated by the fact that of the cotton produced more than 65 per cent. was exported before the war, representing 20 per cent. of the total value of United States exports.

12. — THE NEW TRADE AGREEMENTS OF THE UNITED STATES.

Under the influence of the shrinkage in foreign markets the old trade policy of the United States marked by the high tariffs of 1920, 1922 and 1930 has recently been replaced by a somewhat more liberal policy. In the last two or three years commercial treaties, containing the most favoured nation clause, have been concluded with a whole series of countries, on the basis of the *Trade Reciprocity Act* of 13 June 1934, by which the President of the Republic is authorised to reduce customs tariffs up to 50 per cent. in the conclusion of trade treaties. In February 1937 the Congress granted the President full powers for the making of similar treaties for a further period of three years. Commercial treaties with lowered tariffs have been made with, *inter alia*, Cuba, Brazil, Haiti, Colombia, Canada, Honduras, Nicaragua, Belgium, Sweden, Holland, Switzerland, France and Finland (1).

The most important market for the United States is now the United Kingdom to which 16.2 per cent. of all American exports went in 1929, and 19 per cent. in 1935. It is also the most important market for American cotton exports after Japan. Consequently it is to be understood that negotiations are being carried out with the United Kingdom and other countries for commercial treaties similar to those which the United States have already made. The Imperial Economic Conference held in London in May 1937 has also concerned itself with the question of commercial treaties with the United States.

When the authorisation was granted in 1937 to the President of the United States to conclude commercial treaties until 1940, President Roosevelt said, among other things, the following: "The economic welfare engendered by excessively high and discriminatory trade barriers was one of the main sources of pol-

(1) *Governmental Measures affecting Agricultural Prices*. International Institute of Agriculture. No. 5, 1936, p. 14.

itical animosity and military conflict. At the present time, in view of the lamentable state of world affairs, the United States could not in all fairness relax their efforts or relinquish their leadership of the world movement for a lasting peace through economic prosperity."

This new era of the commercial policy of the United States—the exports of which country represented in volume 16.2 per cent. of the world total in 1929 and 11.7 per cent. in 1936—is of great importance. It is of interest to note that whereas America's percentage of world exports declined from 12.72 per cent. in 1932 to 11.7 per cent. in 1936, or 1.02 per cent. in the world export total, at the same time her percentage of world imports rose from 9.92 to 11.24 per cent. an increase, that is, of 1.32 per cent., in the world import total. In absolute figures exports from the United States declined from 1,576 million dollars in 1932 to 1,427 million dollars in 1936 whilst imports at the same time increased from 1,352 millions to 1,430 millions. These figures thus express the characteristic fact that in American commercial policy a greater importance is being attached to imports.

CONCLUSION.

From the analysis of the present trends of the world cotton market and an examination of all the vagaries of the world cotton trade, the general notion which emerges is firstly that of the manifest instability which characterises contemporary economic life. From the low production crisis of the immediate post-war years the world soon passed to the crisis of markets and the collapse of prices through over-production. This period was then followed by years of prosperity (1926-29) which in their turn were followed by an economic crisis such as the world had never before known.

The crisis which raged since 1929 shook the whole structure of the world cotton market to such a degree that, at the worst point of the crisis, in 1932, not only was the volume of world cotton trade much smaller but also the relative productive capacities of the different cotton growing countries had been radically changed whilst the activity of the cotton industry was diminished.

From the end of 1932 however a recovery in cotton transactions was to be noted, at first rather slow but which by the end of 1936 had become quite appreciable; consumption increases, trade is visibly more lively, etc., to such a point as to awake the fear that, given the alternation of crisis and prosperity years, these are the signs of a real economic "boom," though prices, which had been rising until April 1937, have since shown a declining movement.

In front of this eternal flux and reflux of the economic tide, with its disturbing social effects, man's action seems so far to have been limited. Can the remedy of this situation, to obtain the normal action of economic life and a constantly progressive development, be found in "planned economy"? However it may be, all attempts which have been made to soften the painful consequences of the crisis, especially if they have been made in a country such as the United States, whose commercial transactions are of the greatest importance in world trade, are always full of instructive lessons for international economic policy and offer valuable support for the social peace of the world.

In this regard we may note the deeply significant statement made by Mr. W. L. Clayton (1): "America's stake in world trade is, however, even greater than the recapture of lost markets and the developments of new ones, as compelling as that is. This greater stake lies in America's opportunity and responsibility in the promotion of world peace."

"World peace and how to preserve it is the biggest question in the world to-day. And this question cannot possibly be dis-associated from the problem of world trade and how to restore it."

The new commercial and tariff policy adopted by the United States since 1934 as well as the transformation in the agricultural programme made in 1936, both of which tend slowly to break down the economic isolation of the United States, also contribute indirectly to a better understanding and to the strengthening of the cultural bonds between the people. These two factors represent the indispensable conditions for the widening of world economic intercourse and thereby the further development of the international cotton market.

M. TCHERKINSKY.

LIVE STOCK INSURANCE IN GERMANY

SUMMARY. — *Private insurance against live stock mortality.* Origin and development of this type of insurance. Insurance contracts. Supervision of insurance societies. Legislation for prevention and elimination of contagious diseases. *Private insurance of slaughter stock.*

PRIVATE INSURANCE AGAINST LIVE STOCK MORTALITY.

In 1935 this type of insurance was operated in Germany by 13 large private societies (2) and some 9,000 small local societies (3).

(1) AMERICA CAN LEAD WAY TO ECONOMIC PEACE. *Cotton Trade Journal*, International Edition, 1937, p. 157.

(2) Share companies:

Badische Pferdeversicherungs-Anstalt A. G., Karlsruhe.

Mutual insurance societies:

Altenburger Vieh-Versicherungs-Gesellschaft, Altenburg — *Deutscher Bauerndienst, Tierversicherungs-Gesellschaft*, Berlin — *Braunschweigische Allgemeine Vieh-Versicherungs-Gesellschaft*, Brunswick — *Vieh-Versicherungs-Gesellschaft*, Bremen — *Vaterländische Vieh-Versicherungs-Gesellschaft*, Dresden — *Erfurter Vieh-Versicherungs-Verein*, Erfurt — *Zentral-Vieh-Versicherungs-Verein*, Hildesheim — *Pfälzischer Vieh-Versicherungs-Verein*, Ludwigshafen — *Stuttgarter Pferde und Vieh-Versicherungs-Gesellschaft*, Stuttgart — *Triererischer Vieh-Versicherungs-Verein*, Trèves — *Uelzener Vieh-Versicherungs-Verein*, Uelzen — *Prignitzer Vieh-Versicherungs-Gesellschaft*, Wittenberg.

The foregoing are included in the list given in the Report of the Office of the Reich for Supervision of Private Insurance. In the list published by Neumann's *Jahrbuch der privaten und öffentlichen Versicherung im Deutschen Reich* for 1935 there are included also 4 societies which are not subject to the supervision of the Reich Office:

the *Märkische Vieh-Versicherungs-Gesellschaft* at Berlin;

the *Ostdeutsche Pferde und Vieh-Versicherungs-Gesellschaft* at Frankfurt on Oder (both of these confining operations to Prussia);

the *Bayerische Versicherungs-Bank*, a share company with headquarters at Munich, and the *Vieh-Versicherungs-Verband der Landesbauernschaft Rheinland* with headquarters at Cologne; these two institutions operate live stock reinsurance.

(3) BEINZGER W. *Die Tierlebensversicherung durch kleinere Vereine*. 1936, p. 19.

Origin and Development of this Type of Insurance. — It is generally believed that live stock insurance was introduced into Germany in 1765 by Frederick the Great who endowed the farmers of Silesia with an institution established on a State basis the object of which was the compensation of losses due to cattle plague. It appears however that as early as 1720 insurance contracts existed, as is shown by a policy issued at that time in Hamburg according to which a number of insurers took upon themselves the risk arising from death, disease, theft and other contingencies affecting the animals.

The small local insurance associations are of fairly ancient origin. At first their organisation was rudimentary. Usually there were no rules or terms of constitution and the losses due to the compulsory slaughter of the animals were partially compensated by the distribution of the utilisable meat among the members of the society in accordance with certain regulations. At the end of the XVIIIth and the beginning of the XIXth century several small local societies were founded which replaced these associations: these societies gave compensation no longer in kind but in cash contributed by the members in proportion to their incomes or to the size of their farms. By degrees regulations were made on the scale of compensation payments as well as on the distribution of the dues paid by members, and the societies began to draw up rules. With the progress of co-operation and with the building up of capital in the rural communes, the organisation of these local societies progressed farther: they began to fix the contribution in advance and to form reserves constituted by surplus funds for use in the case of extraordinary losses. These societies, which were designated variously (*Viehgilden*, *Kuhloden*, etc.), sprang up first in Schleswig-Holstein and soon spread all over North-western Germany and into Southern Germany where there were a large number of farms engaged in stock farming. On the other hand this type of insurance did not develop to the same extent in Eastern Germany where there was a predominance of large farms.

The activity of these societies was confined to the territory of a single commune, or at most to several neighbouring communes. Insurance was usually limited to cattle and pigs; for a large number of farmers there was no possibility of covering risks arising from loss of other animals. The need for these additional insurances was met by the formation of larger organisations with a more extended range of action alike from the standpoint of area of operation and from that of the kinds of stock insured.

The first institution of this type was formed in 1833, under the designation of *Viehversicherungsanstalt für Deutschland*, by Herr Masius of Leipzig. This society, founded on the co-operative or mutuality principle, extended operations throughout Germany insuring not only cattle but also horses. Compensation was limited for horses to two-thirds of the value, while full compensation was paid in the case of cattle. As however the premiums proved invariably to be inadequate in view of the very severe losses occasioned by contagious diseases, it was necessary to have recourse in the first instance to supplementary contributions and later to reduce the compensation payments. In consequence the capital insured diminished to such an extent that in 1839 the society was dissolved.

The same fate overtook after a brief existence other societies founded at the same time, the reason being especially their failure to estimate risks with precision and in consequence the call for large additional contributions.

It was only towards the middle of the XIXth century that the first societies were formed which proved capable of maintaining existence. These were the *Pfälzische Viehversicherungsverein* at Speyer formed in 1849 and the *Braunschweigische Viehversicherungsgesellschaft* at Brunswick founded in 1852. Their success was mainly due to the fact that from the beginning of their operations they kept their policyholders under continual supervision and that they were very careful in the acceptance of risks. Several societies which sprang up later and which did not follow this example had only a short span of life.

In any case the development of the large societies was very slow and at times it was almost completely arrested.

Assistance was given to the small local societies, in particular, by the governments of Southern Germany which attempted to develop the organisation of live stock insurance by improvement of the position of these small societies, either by means of State contributions or by the formation of public reinsurance institutions. Further detail will be given in respect of these institutions when dealing with this question, which has a great importance for this type of society.

At the end of the XIXth century, or more precisely in 1898, the numbers of animals insured by the large insurance societies were: 146,316 horses, 133,018 cattle and 96,800 pigs, or 3.06 per cent. of the existing horses, 0.72 of the cattle and 0.68 of the pigs.

The small live stock insurance societies, on the other hand, had in 1897 covered risks for 214,874 horses, 1,150,346 cattle, 1,005,055 pigs and 11,756 goats (figures not including Bavaria and Alsace-Lorraine). The percentages were thus 5.32 for horses, 6.26 for cattle and 6.24 for pigs.

In 1935 the Reich Office for Supervision of Private Insurance registered 15 large live stock insurance societies, two of which dealt exclusively with the insurance of slaughter stock. The 13 societies in question had insured against live stock mortality only 194,149 animals.

In the course of the same year there were in existence 8,792 local insurance societies which had insured against mortality 2,454,976 animals, including 339,854 horses, 1,585,569 cattle, 492,584 pigs and 36,969 goats (1).

Insurance Contracts. — The contracts or policies arranged by insurance societies are regulated in Germany by the Law of 30 May 1908 (2).

This law which deals with the whole sphere of private insurance, with the exception of marine insurance and of reinsurance, is divided into five sections.

(1) MANES, A. Gütersversicherung, Versicherungswesen. V. II, p. 148. — BEINZGER, op. cit., p. 11-19. — TRATZSCHER A. V. Band: Landwirtschaftliche Versicherung; Hagel- und Viehversicherung, p. 96. — Statistik für 1935 über die unter Reichsaufsicht stehenden Versicherungsunternehmungen und Bausparkassen, Berlin and Leipzig 1936, p. 137.

(2) *Reichsgesetzblatt* of 5 June 1908. Entry into force of the Law of 1 January 1910.

The first section is devoted to the provisions applicable to all branches of insurance (general principles, compulsory declaration, heightening of risk, premiums, insurance agents). The second section deals with the insurance of losses (including general provisions relating to the content of the contract, the sale or alienation otherwise of the object insured, etc.), third party risks insurance, fire insurance, hail insurance, live stock insurance, transport risks insurance, and liability insurance. The third and fourth sections deal with life and accident insurance. Final provisions are contained in the fifth section.

Live stock insurance contracts are regulated not only by the general provisions contained in the law and especially by those relating to insurance of losses, but also by a special part of the law. These special provisions apply exclusively to insurance against live stock mortality in all its forms, but not to the insurance of slaughter cattle. For this form of insurance the general provisions of the law hold good as well as those relating to the insurance of losses in general.

Live stock insurance obliges the insurer to repair the loss occasioned by the death of the insured animal. If the death is due to disease or accident, the amount of the loss is estimated at the value of the animal immediately before the occurrence of the disease or accident.

Insurance may also be effected against loss resulting from disease or accident, even when not followed by death.

The insurance does not cover: (1) loss caused by a contagious or other disease, when the insured owner has a legal claim to compensation from the public budget, or when he would have had such a right if he had not lost it in consequence of infringement of the regulations relating to contagious diseases; (2) loss due to measures taken, in time of war or after the proclamation of a state of war, by a military official.

If, on account of a defect in the insured animal, the insured owner has a suit against a third party for payment of guarantee, this suit or claim passes to the insuring body to the extent to which this body repairs the loss caused. Such substitution of rights cannot be effected to the detriment of the policy-holder. If the exercise of the claim to the guarantee has become impossible from fault of the policy-holder, the insuring body is released from the obligation to repair the loss, to the extent to which such loss might have been covered by the claim to the guarantee.

After the occurrence of any insured risk, the insurer is not bound to repair the loss due to a subsequent event except up to the balance of the sum insured. For the further periods of insurance the insuring body can claim only a proportional part of the premium.

The insurer has the right to proceed at any time to the inspection and examination of the insured animals.

The insurer must be informed not only of the death but of any ailment or of any serious accident, affecting the insured animal. Even when the insurance is only taken out for the event of death, the provisions in force on the subject of the declaration of the insured event are applicable to the declaration of cases of disease or accident.

If the insured animal falls ill or is the victim of an accident, the insured owner must, unless the case is really unimportant, at once call in a veterinary surgeon, or, if this is not possible, an experienced person.

Board and lodging expenses, as well as those of the veterinary examination and treatment, do not form part of the expenses to be refunded by the insurer, within the terms of article 63 of the law in question. The cost of the first medical examination, in the case of disease of an insured animal, will be met, in equal shares, by the insurer and the insured owner.

The interest charges on the compensation, as well the claim by the insured owner to a payment on account, are regulated by art. 94 of the law in question.

Whenever the insured owner, either intentionally or by some grave error, seriously maltreats or neglects the animal, the insurer is released from the obligation to make the payment, unless the injury does not result from the bad treatment nor from the negligence. Omission to call in a veterinary surgeon or experienced person constitutes serious negligence.

The insured owner may not proceed to forced slaughter of the animal without the consent of the insurer, unless it has been impossible to wait for the opinion. If it is established by the report of the veterinary surgeon, or in the event of his presence being impossible, on the report of two experienced persons, given before the slaughter, that this was necessary, and if it was impossible to await the opinion of the insurer, the latter must yield to the accomplished fact. If—with the reserves as stated—the slaughter took place without the consent of the insurer, the latter is released from making the payment.

In a case where the obligations arising from the insurance come to an end on a date after the insured animal has fallen ill or has been the victim of an accident, such expiry of the contract does not affect the liability of the insurer, if the disease or accident result in the death of the animal within two weeks to be reckoned from such expiry.

In the case of sale of an insured animal, the insurance comes to an end in respect of that animal; the insurer has none the less a claim on the premium for the insurance period in course. If the death of the animal occurs in consequence of a concealed defect before the period of insurance in course or within two weeks of the sale, the insurer remains liable towards the policyholder, to the extent to which the latter is legally bound in respect of the guarantee towards the purchaser.

Supervision of the Insurance Societies. — The operations of the insurance societies are subject to the supervision of the governmental offices of inspection. The fundamental law of 12 May 1901 was amended several times and has finally been replaced by a new text which bears the date of 6 June 1931 and which has been amended several times, most recently by the Law of 5 May 1937.

This law is not applicable, *inter alia*, to societies operating exclusively reinsurance, with the exception of mutual insurance societies, and with reserve of decision in contrary sense by the Minister of National Economy, nor to public insurance institutions established on the basis of the laws of the individual States. These institutions are none the less required to submit to the Reich Office of Supervision certain reports on the course of their operations.

*Large Insurance Companies or Societies Operating Insurance against Live Stock Mortality
and Insurance of Slaughter Stock in 1935.*

Society	Capital 1000 RM	Legal reserve 1000 RM	Premiums 1000 RM	Compensa- tion payments 1000 RM	Insurance against live stock mortality		Insurance of slaughter stock	
					Number of insured animals	Sums insured 1000 RM	Number of insured animals	Sums insured 1000 RM
Share company:								
Badische Pferde Vers. Anstalt A. G.	500	75	1,715	1,126	30,495	22,798	41,592	9,906
Mutual insurance societies:								
Altenburger Vieh V. G.	—	237	645	660	15,924	12,438	—	—
Deutscher Bauernfonds, Tierversicherung G.	—	261	7,680	8,559	76,429	43,509	2,850,613	408,833
Braunsch. Allgemeine Vieh V. G.	—	155	223	196	5,302	3,248	7,205	977
Vieh V. G.	—	6	5	1	144	88	—	—
Vaterländische Vieh V. G.	—	235	682	647	12,420	8,690	11,126	2,383
Erfurter Vieh V. V.	—	37	664	646	15,344	11,096	—	—
Zentral Vieh V. V.	—	68	641	372	12,877	9,237	75,212	14,039
Plätzischer Vieh V. V.	—	47	488	332	10,869	8,010	—	—
Stuttgarter Pferde-u. Vieh V. G.	—	141	182	133	3,563	3,262	—	—
Trierischer Vieh V. B.	—	—	13	16	1,959	608	—	—
Uelzener Vieh V. B.	—	81	354	252	8,104	5,321	814	115
Prignitzer Vieh V. G.	—	13	28	18	719	376	—	—
Other societies:								
Allg. Deutsche Schlachtvieh V. Anstalt (Gebr. Lange)	—	—	2	1	—	—	1,000	138
Hamburg-Altonaer Vieh V. G. m. b. H.	60	60	278	317	—	—	440,094	69,320
Totals	500	1,416	13,600	13,276	194,149	128,681	3,427,656	595,711

Supervision of insurance societies confining their operations to a particular State is exercised by the inspection authorities of that State. Otherwise, the supervision is exercised by the Office of the Reich for Supervision of Private Insurance (*Reichsaufsichtsamt für Privatversicherung*).

This office exercises supervision also over insurance societies the activity of which is limited to a particular State, if so desired by that State and if the Minister of National Economy so provides. The amending law of 1937 prescribes that the Minister may arrange that the authorities of the particular State shall co-operate in the supervision and may regulate the procedure of the supervising authorities somewhat differently from the method prescribed by the law.

Small insurance societies whose activity is very restricted in respect of scope, area or membership, are placed under the inspection authorities of the States in which they are situated; and this even if they extend operations beyond the borders of this State, provided that the Minister of National Economy in agreement with the government of the State in question so decides.

These societies come under a part only of the rules contained in the section of the law relating to mutual insurance societies.

The law on the supervision of insurance societies is divided into ten sections: (1) preliminary matter; (2) authorisation to operate insurance; (3) mutual insurance societies; (4) management of the affairs of insurance societies (general provisions, submission and examination of the budget, special provisions respecting the reserves of life insurance societies and provisions for prior claims in the event of bankruptcy in respect of insurance against losses); (5) supervision of insurance societies (functions and rights of authorities responsible for supervision); (6) undertaking of foreign insurance; (7) building savings funds (*Bauspar-kassen*); (8) temporary provisions; (9) penalties; (10) final provisions.

Law Relating to Contagious Diseases. — It has already been noted when examining the insurance contract in respect of live stock mortality that the insurer is not bound to payment of the compensation in the case where the loss incurred, consequent on a disease, contagious or otherwise, which has attacked the insured animal, carries the right to compensation by the public authorities, even if the insured owner has lost the right owing to infringement of the governmental provisions on the subject of contagious diseases.

It may be of interest to examine the important law of 26 June 1909 which regulated the whole question of contagious disease with the exception of cattle plague, which is subject to a separate legislative regulation.

This law, which contains 82 articles, after defining live stock and suspected animals, and after having established the competent authorities as the governments of the separate States, passes on to measures of protection against contagion coming from abroad. The law prohibits the import of animals attacked by a contagious disease, or suspected, or even of those which have been affected by a similar ailment; the import is also prohibited of products of such animals or of any object which might be presumed to convey the contagion virus. For the sake of preserving immunity, prohibition or limitation of live or dead animals and of products of such animals may be proclaimed either generally,

or for certain frontier localities. So as to avoid the introduction of live stock attacked by a contagious disease, all animals with undivided hoofs, all ruminants and all pigs are subjected to a medical inspection by an official veterinary surgeon either at the frontier or on arrival at a German port. Animals found to be diseased or suspect are excluded. Ruminants and pigs which have arrived by sea and the introduction of which is permitted by the veterinary surgeon must remain in quarantine during four weeks in a *dépôt* set aside for the purpose, and only after this period can be admitted into German territory.

Articles 8 to 73 prescribe the measures for combatting epidemics within the country. In the first place general measures are enacted; then follows the provision that every owner of an infected or suspect animal, or any person who has the care or supervision of such animal, must immediately notify the police. Others bound to make this declaration are: all veterinary surgeons or inspectors of butcher's meat, all butchers, etc.

The following is the list of the diseases subject to declaration:

- (1) anthrax; symptomatic anthrax; haemorrhagic septicaemia of cattle;
- (2) Rabies;
- (3) Glanders;
- (4) Foot and mouth disease;
- (5) Contagious pulmonary disease of cattle;
- (6) Sheep pox;
- (7) Covering disease of horses.
- (8) Coital rash of horses and cattle ;
- (8) Wart disease of horses, mules and sheep;
- (9) Haemorrhagic septicaemia of pigs and swine fever;
- (10) Erysipelas or red murrain and nettle fever of pigs;
- (11) Chicken cholera and pest;
- (12) Tuberculosis of cattle which has recognisable external characteristics,

in so far as it has reached an advanced stage in the lungs, the udders, the uterus or the intestines.

Sanitary police measures established in the law under review, and designed to combat epidemic contagious diseases, are either preventive or eliminative. The first category includes for example the veterinary inspection at the time of transport of animals, the limitation of access or even closing of markets or of shows to animals carriers of disease, etc. These measures may be of permanent type, *i. e.*, independent of the occurrence of cases of these diseases, while the eliminating measures are taken only on the outbreak of a contagious disease and continue in force for its duration only. To this group of measures belong, *e. g.*, the isolation and supervision on the part of the sanitary police of infected or suspected animals, the interdict placed on the farm and even on the locality to carry on trade in animals, the inoculation or the slaughter of animals infected or suspect, the public notification of the outbreak and of the end of the epidemic, etc. In addition to these general measures designed to combat contagious diseases the law contains a series of special instructions enacted with a view to one or other disease.

Small Local Societies for Insurance

Year

No.	States	Number of societies	Horses		Cattle	
			number	value	number	value
1	Baden	929	3,000	2,100,000	310,000	93,000,000
2	Bavaria (incl. the Palatinate) . . .	(¹) 268	12,658	8,860,600	56,553	16,965,900
3	Brunswick	(¹) 256	7,318	5,122,600	7,630	2,289,000
4	Hanover,	(¹) 1,372	58,121	40,684,700	116,373	34,911,900
5	Hesse-Nassau	442	21,754	15,227,800	82,494	24,748,200
6	Electoral Hesse	271	7,753	5,427,100	61,376	18,412,800
7	Electoral Mark	(¹) 193	4,271	2,989,700	7,419	2,225,700
8	Mecklenburg	148	12,114	8,479,800	5,459	1,637,700
9	Oldenburg	103	15,141	10,598,700	13,916	4,174,800
10	Eastern Prussia	(¹) 455	3,961	2,772,700	37,674	11,302,200
11	Pomerania	51	4,853	3,397,100	7,019	2,105,700
12	Rhenish Prussia	754	38,467	26,926,900	68,709	20,612,700
13	Anhalt	600	35,149	25,498,289	36,469	8,254,604
14	Free State of Saxony	(¹) 65	30,996	21,697,200	986	295,800
15	Silesia	(¹) 99	2,327	1,628,900	7,725	2,317,500
16	Schleswig-Holstein	(¹) 288	22,886	16,020,200	18,971	5,691,300
17	Thuringia	386	16,311	11,417,700	46,905	14,071,500
18	Westphalia	(¹) 693	23,257	16,279,900	71,108	21,332,400
19	Wurtemberg	1,405	19,309	13,516,300	624,626	187,387,800
20	Territory of the Saar	14	208	161,700	4,157	1,433,238
		8,792	339,854	238,807,889	1,585,569	473,170,742

(1) As a certain number of societies have not supplied these data, average figures have been inserted

against Live Stock mortality.

Pigs		Goats		Sheep		Total	
number	value	number	value	number	value	number	value
—	—	—	—	—	—	313,000	95,100,000
869	86,900	1,490	29,800	—	—	71,570	25,943,200
40,629	4,062,900	2,300	46,000	—	—	57,877	11,520,500
80,640	8,964,000	2,822	56,440	112	3,360	267,068	84,620,400
20,353	2,035,300	3,908	78,160	—	—	128,509	42,089,460
12,496	1,249,600	3,168	63,360	—	—	84,793	25,152,860
27,942	2,794,200	—	—	1,681	50,430	41,313	8,060,030
10,818	1,081,800	—	—	—	—	28,391	11,199,300
2,035	203,500	50	1,000	—	—	31,142	14,978,000
—	—	64	1,280	—	—	41,699	14,076,180
13,868	1,386,800	60	1,200	—	—	25,800	6,890,800
12,449	1,244,900	1,755	35,100	—	—	121,380	48,819,600
180,202	31,535,350	5,831	102,524	—	—	257,651	65,390,767
3,680	368,000	—	—	—	—	35,662	22,361,000
10,860	1,086,000	423	8,460	—	—	21,335	5,040,860
20,160	2,616,000	—	—	—	—	68,017	24,327,500
8,276	827,600	8,421	168,420	—	—	79,913	26,485,220
28,953	2,895,300	4,313	86,260	—	—	127,631	40,593,860
3,354	335,400	655	13,100	—	—	647,944	201,252,600
—	—	1,709	53,379	—	—	6,074	1,648,317
492,584	62,773,550	36,969	744,483	1,793	53,790	2,456,769	775,550,454

The important question of compensation now claims attention. The slaughter of animals infected or considered as suspect in virtue of sanitary measures, the losses caused by the disease in spite of the declaration made in good time, or even by the inoculation ordered by the veterinary police, all these involve serious losses for the owner.

For several of the losses due to epidemics, in respect of which no private compensation is assigned, and in addition for certain losses due to State measures relating to the control of epidemics, compensation is awarded from the public budget.

According to the law compensation is due:

(1) For animals which have been killed in conformity with a sanitary measure or which have died after the issue of the order in consequence of a disease which has been the occasion of the order in question;

(2) For animals which, after due notification of the disease has been given, have died in consequence of glanders or of contagious pulmonary disease, provided that the conditions were those in which slaughtering has to be prescribed;

(3) For animals in the case of which it may be supposed that the death is due to the inoculation ordered by the sanitary authority;

(4) For cattle and horses which have died as the result of anthrax or symptomatic anthrax or in the case of which it has been possible after death to ascertain that they had been attacked by one of these diseases. The amount of the indemnity is determined on the basis of the ordinary value of the animal and without taking account, except in the case of tuberculosis subject to declaration, of the depreciation due to the disease or to the inoculation.

The compensation is reckoned at three fourths of the ordinary value when the animal has been attacked by glanders, to four-fifths of the ordinary value in cases of animals are attacked by anthrax, or symptomatic anthrax, by contagious pulmonary disease and by tuberculosis: in all other cases the compensation is equivalent to the total value, as, for example, where an animal has been attacked by foot and mouth disease or has died following on an inoculation.

In arriving at the amount of compensation, account is taken of the sum obtained by the owner from any utilisation of the carcase and of any contractual indemnity of private insurance; in respect of the different epidemics, there is to be considered the fraction which represents the compensation of the ordinary value of the animal.

No compensation is granted for animals the ownership of which rests with the Reich or with the separate States, nor for animals which have been imported into the territory of the Reich, contrary to a prohibition, or which have been attacked by a contagious disease within a certain period after their importation, unless proof is supplied that the infection occurred only after their introduction.

An application for compensation is of no effect, if the owner of an animal attacked by the epidemic, or even the representative of the owner, either intentionally or from negligence, has not submitted the declaration of the disease in accordance with the sanitary police instructions, or if there is, on his part, an infringement of the measures of protection enacted by the same authorities.

It is the business of the separate States to make rules as to the method of fixing the compensation, as to the body responsible for its payment, etc.

It should however be remarked that the public authorities are responsible for the whole of the compensation payable for animals slaughtered in accordance with sanitary orders, if the animals were not attacked by the disease in respect of which the slaughter was ordered; for one half of the compensation at least if the animals were attacked by foot and mouth disease and for one third if the animals were attacked by a form of tuberculosis which declaration is compulsory.

Subject to these reserves, the provisions in force in the different States remain standing.

With the same reserves and in so far as these provisions are not in contradiction with these measures, the States may establish that, pending further regulation, compensation payments will be constituted from the contributions paid by the owners of the kinds of animals in question.

PRIVATE INSURANCE OF SLAUGHTER STOCK.

Insurance of slaughter stock covers losses arising in the event of the meat being declared, according to the report following the compulsory inspection at the slaughter house, either entirely unfit for utilisation or fit to be delivered for consumption only under certain restrictions.

Wherever compulsory veterinary inspection of butcher meat has been instituted, associations for insurance of slaughter stock were very shortly after constituted: these societies reimbursed their members for losses incurred when the meat proved wholly or partially unfit for consumption.

In the formation of associations of this type the lead was taken by farmers, butchers and stock dealers: certain communal and provincial administrations also instituted a service of slaughter stock insurance. The number of killings and the number of declarations of unfitness of the meat for consumption render the insurance of slaughter stock a matter of importance. The value of the meat destroyed as unfit for use is very large, and was estimated by M. Beinzger in the *Manes "Versicherungsexicon"* in the course of 1926 as 26 to 30 millions of marks.

The Law of 13 June 1900 regulated this question for Germany, leaving to the separate States the business of establishing the rules for carrying out the insurance within certain limits.

From 1 April 1903 every animal the flesh of which is intended for sale and for human consumption has to be subjected before and after slaughter to examination by experts. Only meat declared wholly utilisable may be admitted to the open market, while meat declared partially unfit for use may be sold only under certain restrictions, and meat unfit for use must be destroyed.

In 1902, insurance of slaughter stock was operated in Prussia by more than 300 undertakings. These had in 1901 insured 1,500,000 cattle, 2,350,000 pigs, 25,000 sheep and ewes, in all about 3,800,000 head of slaughter stock. The majority of the members of these associations were farmers and butchers.

The sphere of action was very limited; a large number of dealers and of farmers supplying live stock to the small towns or even to the rural communes had no opportunity of taking part in the insurance. Nor was it possible for them to form local associations, for want of an adequate membership. Hence the large insurance companies considered it a suitable moment to organise a special department of insurance at fixed premiums of slaughter stock.

In 1905 seven large companies instituted this branch of insurance. Including the Hanover stock dealers' association and seven associations of less importance insuring slaughter stock against certain risks (deterioration of quality due to trichinosis, to tape worm or to tuberculous affections), there might be calculated, for the insurances undertaken in 1905 by all these societies, an insured capital of 312,381,000 marks relating to 1,959,707 head of stock. The premiums paid by the insured persons amounted to 2,771,746 marks.

In 1935 this branch of insurance was operated by seven large insurance societies, which have insured in all 3,427,656 animals for a capital of 505,711,000 marks (1).

The small local societies are usually organised by meat dealers and by butchers as collateral organisations of their corporation. There also exist however many insurance associations independent of these organisations. Farmers' organisations for the purpose of insuring slaughter stock have become much less frequent in comparison with other associations. This type of insurance is however very often included in insurance policies against live stock mortality. There are also associations under the joint management of dealers in meat, butchers and farmers (2).

(To be continued)

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(1) Statistik des Reichsaufsichtsamtes 1935, p. 137.

(2) MANES, Versicherungsllexikon 1930, p. 1937.

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THE CONSUMPTION OF MEAT *

SUMMARY: Introduction. — Some causes of the increase in meat consumption in the course of the XIXth century. — Present position of meat consumption in the different parts of the world. — Probability of an increase in meat consumption in the near future.

At the beginning of the XIXth century, the consumption of meat was throughout Europe, for the large mass of the population, alike in country and town, very small indeed as compared with the present consumption, and moreover the greater part of the small quantity consumed was in the form of salt, smoked or dried meat. Apart from game, it was usually during two or three autumn months only, on the occasion of the great annual slaughtering, that fresh meat was eaten and this was equally the case with the richer people. In the course of the XIXth century, under the influence of several factors depending as much on supply as on demand, these conditions have been radically altered; there is a constantly increasing consumption of fresh meat and in many countries the total consumption of meat per head is being doubled, trebled or even quadrupled.

Some Causes of the Increase in Meat Consumption in the Course of the XIXth Century.

Among the changed conditions affecting the supply of meat there were some which may be dated earlier, but their full development belongs to the XIXth century, as for example the disappearance of the open field system, the consolidation of holdings previously scattered and their enclosure, the modification of the former three-field system of cultivation—winter cereals, spring sown cereals and fallow—the introduction into the rotation of the growing of mangolds and other edible roots and of artificial grasses, and especially the scientific breeding and feeding of farm animals.

* Some of the main sources indicated by figures in the text will be found at the end of the article.

The disappearance of the open field system enabled each farmer to introduce with advantage, and without let or hindrance, the new system of crop rotation. The cultivation of roots and artificial grasses, which do not remove from the soil the same elements as do the cereals, did away with the necessity for leaving the lands in fallow and increased the area under production very considerably, thus rendering practicable an adequate supply of winter feed for an increasing number of live stock. The enclosure of the ploughed land, as well as the division of the common lands, involved, undoubtedly, for the poorer strata of the population, a decided decrease in the supply of meat, but it represented on the other hand a considerable increase in the total quantity produced of this class of food-stuffs.

The result of the scientific breeding and feeding of farm animals which, as already stated, became widely adopted only in the XIXth century, was seen in a larger gross weight of slaughter stock and in a higher percentage of net meat per animal, thus in a more rapid securing of a sufficient dead weight, and in consequence quicker sales. In Germany, from 1800 to 1903-05, the dead weight increased for steers by about 85 per cent., for heifers and young bullocks by about 112, for pigs by 108 and for sheep by 47 per cent (1). In France, towards 1860, cattle were placed upon the market at the age of 6 to 8 years, while just before the world war the market age was only 3 to 5 years; in the same country whereas in 1862 the average net weight of steers, calves and pigs was respectively 225, 39 and 88 kg., it rose immediately before the war to about 312, 80 and 111 kg. respectively; or a respective increase of about 38, 105 and 26 per cent. As a consequence of the increase in dead weight the total production of steers, calves, sheep and pigs in France has doubled in the course of the last 50 years and that although the number of cattle has increased only by one fourth in the course of the same period, that of pigs by one third only and the number of sheep has seriously declined (2).

Among the other factors which have contributed markedly to an increase in the production of meat, while making their appearance only towards the end of the XIXth century, there should be mentioned the use of chemical fertilisers, with the consequent increased production of forage, the constantly increasing use of artificial feeding stuffs, and the changes which have revolutionised the methods of slaughtering and of distribution of meat with the invention of artificial refrigeration and the development of means of transport. These latter changes date from about 1870 when the first consignments of frozen meat reached Europe from the United States, from South America and from Australia, and thereupon opened to the European consumer those immense "meat reservoirs" where formerly animals had been raised and slaughtered merely for their fat and their hides. In conclusion, it should be added that the gradually more extended knowledge of the nature and manner of diffusion of the more dangerous contagious diseases which formerly, and often at short intervals, decimated the herds, has contributed essentially to an increase in the production of meat.

Among the numerous factors which have contributed, in the course of the XIXth century, to the increase in the demand for meat, some of the more

important only will be indicated here: the general rise in real wages, the concentration of the population in towns, the recommendations of the nutrition physiology, the changes in the age constitution of the population, compulsory military service, etc. Life in the towns, especially in the large towns, with its artificial conditions of work and existence especially for the poor man—the time spent in houses, places of work and of amusement cramped and ill-ventilated, the sedentary work which makes no demand on physical effort, absence from home often for the whole day, the always increasing difficulty of obtaining foodstuffs in the natural state, etc.—increased the need for a highly stimulating form of nourishment, possessing great satiety value, and not requiring much or any preparation to be appetising, all qualities possessed by meat. It remains for a relatively long time in the stomach, it sets up, as do many other stimulants, an almost immediate sense of increase of force and vigour, and for the busy workman's wife who has often another occupation and who is not a very skilful cook, meat is a dish which can be quickly prepared in savoury fashion, with the simplest ingredients, and which if in the form of pork-butchers' meat does not demand any preparation. Taking into consideration also that the town population has, the whole year, under its eyes, much more than the rural population, all kinds of meats and meat products displayed for sale, and that every day it is subjected to the influence of the commercial and scientific propaganda in favour of an increasingly carnivorous diet, it is not in any way surprising if the consumption of meat has increased parallel with the increase in the urban population.

It is no less certain that the teachings of Liebig, Moleschott, Playfair and many other celebrated scientific workers towards the middle of the XIXth century, in regard to protein as the only source of muscular force—"the noblest of the elements of nutrition" as Liebig said—led to an increase in meat consumption. It is true that Voit and Pettenkofer demonstrated the falsity of this idea, but none the less Voit, on the basis of his metabolism experiments, and of enquiries into budgets and consumption of meat in the city of Munich, judged the essential requirements of an adult man weighing 70 kg. and engaged in physical work for 9 or 10 hours per day, to be 118 grammes of protein per day, of which a proportion must be supplied by a ration of meat of 230 grammes including bone and fat (3). These requirements were adopted as rules in the physiology of nutrition and up to the time of the world war were often considered as minimum requirements.

Undoubtedly the compulsory military service introduced in the course of the XIXth century was the cause of an immense increase in the consumption of meat in general, by habituating one group after another of young conscripts, for the majority of whom meat had been a rare luxury, to consume each day a ration of meat the size of which was determined in respect of the exaggerated nutritive value ascribed to flesh food by Liebig and Voit. From the middle of the XIXth century up to the time of the world war the conscripts of the greater number of the European countries received a peace ration of about 200 to 300 grammes of meat per day and a war ration of 400 to 500 grammes (4). The recent increase of the meat consumption in a number of

countries is also, no doubt, partly due to the world war, during which not only many classes of conscripts of 20 years of age, but also some large proportion of the remainder of the adult male population in the belligerent countries became accustomed to a large consumption of meat.

Finally, the consumption of meat has been, undoubtedly, increasingly affected by the general diminution in the number of births and of deaths which has been noticeable during the last decades in the countries inhabited by the white race, thus increasing the proportion of adults, the larger consumers of meat. The decline in the number of births has naturally also increased the income at the disposal of each member of the family for the purchase of the more costly foods, such as meat; this appears very clearly from several recent enquiries into family budgets. For example; according to the German enquiry of 1927-28 the expenses for meat and meat products amounted yearly, in the workers' families with 4 or more children to 63.70 marks per unit of consumption, while the similar expense in families having one child only was 118.09 marks and in childless families 150.40 marks.

Present Position of Meat Consumption in the Different Parts of the World.

Leaving the question of the causes of increased consumption of meat in the XIXth century we may pass on to our own times to give a rapid survey of meat consumption among certain of the peoples of the world. With this object there are shown in Table I the data on the consumption of meat per head in a certain number of European and extra-European countries, calculated on the basis of the statistics of exportation, importation and production, while in Table II are reproduced data on the consumption of meat and the expenditure on meat in the families of urban workers, the data being drawn, for the most part, from the family budgets enquiries undertaken in the course of the last ten years (5). For the reader who is interested, this latter table also contains data on the consumption of other important animal foods containing protein, such as fish, milk, cheese and eggs. As a general critical observation in regard to the data contained in these tables, it should be added that for various reasons, some of which are mentioned in the note below, a limited value only should be attached to them for the purpose of estimating the consumption of meat in the different countries, and that comparisons between countries should be made only with considerable reserves (*).

(*) As regards the figures in Table I, it should be noted that they refer only to beef, veal, mutton and pork, and consequently exclude other types of meat, such as horse flesh, poultry, rabbits and game. In many cases, if these latter kinds of meat had been included in the total figures, much larger figures would have been reached; for Belgium, for example, it is calculated that the consumption of poultry and rabbits alone amount to 20 kg. per annum and per head (6). It should in addition be noted that while the net figure respectively of exports and imports of meat is relatively easy to establish with sufficient precision, it is impossible to do the same for that part of the national production which lies outside the public slaughterhouses or the official inspection of meat, since it has been rarely possible to make any but a very rough calculation of the number of private slaughter-

In passing in our review from the peoples that are large consumers of meat to those who consume little, there will be found—as may be easily explained—at the head of the first group primitive tribes living in the most northern regions of Asia, Europe and America, as well as the inhabitants of Tierra del Fuego and Patagonia—by now, however, almost extirpated—although the majority of these races are not so exclusively carnivorous as is generally believed. Very carnivorous races are found also in other parts of the world; for example, the Kirghiz in Central Asia who according to the investigations of the physiologist Kuczynski, consume every day—unless they are living in great poverty—one kg. of meat at least, but more often from 2 to 2 ½ kg. besides some litres of koumis, without mentioning the much larger quantities of these two foods which they succeed in consuming at the time of celebrations of any kind (8). A consumption of meat not much lower will be found also among a certain number of Hamite tribes, pure or mixed with negro blood, who are engaged in live stock farming in the steppe regions of North-East Africa. Among these special mention should be made of the Masai, much discussed during recent years in the literature on the physiology of alimentation. The essential components of their food are raw meat, blood and milk. According to the investigations of Orr and Gilks, the young men of the “morán” or warrior class, consume every day at least over a kg. of meat (1.135 gm.), 2 litres of milk and a certain quantity of blood (9).

ings and of the average dead weight of the animals thus killed. Another point which renders more difficult international comparisons is that in certain countries the edible meat offals are included in the figure of meat consumed, while in other countries they are not so included.

As regards the data of Table II, it should be noted that the enquiries from which they are drawn have often been confined to one or more large towns, where the consumption of meat, as a rule, is larger than in towns of less importance. The majority of the enquiries moreover reflect only the consumption habits of the more well-to-do classes of the working population of the towns. This limitation is mainly due to the difficulty of finding among the poorer classes the stabilised methods of housekeeping, the initiative and perseverance necessary to keep household books with care and accuracy over a long period. In many cases the representative character of the figures is affected by the fact that they refer only to a relatively small number of families or that the enquiry lasted over a relatively short period only, thereby bringing the data on meat consumption, as well as those relating to some other products, under seasonal influences. It is also evident that the consumption habits, especially in our own times, have undergone fairly considerable variations in the course of a period of ten years, and consequently it is by no means certain that the figures of the table, in so far as they are drawn from enquiries dating further back than the middle of the period 1920-1930, give an exact idea of the consumption in 1937. In conclusion it may be noted that among the factors which render difficult a comparison between countries is the difference in the scales that have been utilised for the calculation of the consumption units. However, apart from the so-called new German scale (utilised in the German enquiry of 1927-28) and the so-called old German scale (used in Czechoslovakia in 1929-30), the various scales do not appear to give results so different as to make quite impossible an international comparison. As regards the figures relating to the quantities consumed in Germany and in Czechoslovakia, it should be noted that the German figures are probably somewhat lower (10-20 per cent.) and the Czech figures somewhat higher (20 per cent.) than they would have been if calculated according to the other more generally utilised scales (7).

TAB. I. — *Estimated Annual Consumption of Meat in Various Countries (1)*

(Kilogrammes per head of population)

Countries	Total meat (2)		Beef and veal		Mutton and lamb		Pork, bacon and lard	
	1925-29	1930-34	1925-29	1930-34	1925-29	1930-34	1925-29	1930-34
Argentina (3)	126.8	120.8	114.0	108.4	7.3	6.8	5.5	5.6
New Zealand (4)	106.8	103.8	(5) 60.4	(5) 53.3	35.9	41.8	10.5	8.7
Australia (4)	107.2	91.5	69.0	46.2	30.0	37.3	8.2	8.0
Canada	69.1	65.4	30.9	27.5	2.8	3.2	35.4	34.7
United Kingdom	62.4	63.7	(6) 31.5	(6) 29.1	(6) 12.3	(6) 13.9	18.6	20.7
Denmark	47.0	62.4	21.9	26.4	—	—	25.1	36.0
United States	62.3	61.9	24.2	23.4	2.5	3.1	35.6	35.4
Estonia (7)	58.4	53.4	14.6	19.2	7.0	5.4	36.8	28.8
Germany	49.9	51.1	17.2	16.2	0.8	0.6	31.9	34.3
Switzerland	(8) 44.2	47.3	(8) 25.5	25.5	(8) 0.7	0.6	(8) 18.0	21.1
Netherlands	42.5	45.6	20.0	17.9	0.4	0.5	(9) 22.1	(9) 27.2
France (10)	41.7	43.5	21.2	22.7	3.2	3.1	17.3	17.7
Belgium	36.2	39.2	19.3	18.1	0.6	0.6	16.3	20.5
Sweden	(11) 38.7	(12) 36.1	(11) 19.0	(12) 14.0	(11) 0.7	(12) 1.1	(11) 19.0	(12) 21.0
Czechoslovakia	34.2	33.3	13.3	12.5	(13) 3.4	(13) 3.3	17.5	17.5
Norway	31.0	33.1	14.4	14.7	5.5	5.4	11.1	13.0
Finland	28.3	26.7	14.5	13.3	1.8	1.3	12.0	12.1
Russia (14)	23.2	—	9.9	—	4.7	—	8.6	—
Roumania	—	22.0	—	7.5	—	3.5	—	11.0
Poland	18.0	18.7	6.9	7.3	0.3	0.2	10.8	11.2
Italy	19.8	16.1	11.8	9.8	1.6	1.3	6.4	5.0

(1) Except for France, Estonia, Russia and Argentina all figures are taken from League of Nations: *La probl me de l'alimentation*, Vol. IV. *Statistique de la production, de la consommation et des prix*: Documentation pr par e par l'Institut International d'Agriculture. Revised edition to be published later. — (2) Excluding poultry and game, goat's and horse flesh. — (3) The figures which refer to the periods 1926-30 and 1931-34, are calculated on the basis of data published in *Foreign Crops and Markets* (Washington), Vol. 30, June 10, No. 23, p. 655. — (4) Averages for the agricultural years 1924-25 to 1928-29 and 1929-30 to 1933-34. — (5) Veal not included, the wide variations in the weight of carcasses under this heading making impossible any accurate estimate. — (6) Averages based on annual figures referring not, as in the case of pork, to calendar years but to the twelve months periods June-May. — (7) Figures (averages for the agricultural years 1924-25 to 1928-29 and 1929-30 to 1933-34) calculated on the basis of data taken from *XIII Annuaire de la Statistique agricole* 1934. Tallinn, 1935, p. 39. — (8) Averages for the three years 1926, 1928 and 1929. — (9) No allowance made for variations in the export of lard. — (10) Figures taken from the article *THE WORLD SITUATION IN CATTLE AND BEEF*. *Foreign Crops and Markets* (Wash.), Vol. 21, No. 3, 1930, p. 83 and Vol. 30, No. 23, 1930, p. 656. — (11) 1924-28. — (12) 1932-33. — (13) Included under this heading are also horse and goat's flesh. — (14) The figures, which refer to the period 1924-25 to 1928-29 are calculated on the basis of data published in *CATTLE AND BEEF SURVEY. A SUMMARY OF PRODUCTION AND TRADE IN BRITISH EMPIRE AND FOREIGN COUNTRIES*. Prepared by the Intelligence Branch of the Imperial Economic Committee. London 1934, p. 159.

Among the peoples of western civilisation, the largest consumption of meat is found in the countries where the population is originally from Europe: Argentina, New Zealand and Australia, *i.e.* countries with a superabundance of live stock and a comparatively small population. From Table I it appears that the meat consumption, per head and per annum, was in Argentina 121 kg., in New Zealand 104 kg. and in Australia 92 kg. It appears also that, for meat consumption as shown by the enquiries into family budgets reproduced on Table II, there stands first in this respect the workman of the Argentine capital (91 kg. per annum and per unit of consumption). There can be little doubt that if budget enquiries were available quite as high a consumption could be noted among the urban workers of Australia and New Zealand.

A smaller consumption figure but still a high one is to be found in Europe. For the majority of the European countries shown on Table I, the average consumption, per head and per annum, was from 30 to 60 kg.; in Denmark and in England it exceeded 60 kg. and fell in Russia, Romania, Poland and Italy respectively to 23, 22, 19 and 16 kg. In other words, the figures of the table prove what might have been expected taking into account differences in climate, distribution of population according to occupations, standard of living, etc., *viz.*, that in the northern and central parts of Europe the consumption is relatively high, while it is low in the East and in the South.

Confirmation of this generalisation, with some exceptions, is found in the data shown on Table II relating to the consumption calculated by unit of consumption, but it is evident that whereas in one case it is a question of data on the average consumption of all the population, and in the other case it is one of the consumption of a relatively restricted stratum of population, workers in towns, an absolute agreement as to the order on the list of the different countries cannot be expected. It will be noted that for the majority of the budget enquiries consumption per unit of consumption and per annum is about 40 to 50 kg. The highest consumption figure was reached by the working families of Vienna (84.7 kg.) and of Copenhagen (73.6 kg.), the lowest figure for the workers' families of Southern Italy and Sardinia (Lecce, Palermo, and Cagliari) which are respectively 5.6, 10.9 and 13 kg.

An equivalent consumption of meat, and often even less in quantity than that of the Italian towns referred to, is to be noted, with a few exceptions—among which should be named those tribes of North-East Africa and Central Asia mentioned above—as occurring with all the nations and all races inhabiting the immense steppe and desert territories extending from the North of Africa across Asia Minor, Syria, Palestine, Arabia, etc., as far as Mongolia. This scanty consumption will be found as much in the towns as among the dwellers in the open country whether farmers or nomads. The budget enquiry undertaken in 1930 among the Arab and Jewish population of Palestine, for example, supplies proofs in respect of the very small quantities of meat consumed in the parts of the world indicated above. Thus among Jewish workmen, coming originally from the Orient, living in towns (see Table II), the consumption of meat was 11 to 12 kg. per annum and per unit of consumption, and

TABLE II. — *Consumption of and Expenditure on Meat and Other Animal Products*

COUNTRY	Localities	Date of enquiry	Number of families included	Average number of members per family	Average number of consumption units per family	Average annual total expenditure in national currency per family	Food expenditure as % of total expenditure
Norway	Towns	1927-28	135	4.46	3.36	Kr. 4,208	42.0
Sweden	Towns and industrial centres	1933	610	4.11	3.38	Kr. 3,659	34.7
Denmark	Copenhagen	1931	149	3.59	2.97	Kr. 4,499	35.5
	Provincial towns	1931	236	3.89	3.12	Kr. 3,496	33.3
Finland	Towns and industrial centres	1927-28	581	4.57	3.45	M. 25,266	48.1
Great Britain ..	Port of Liverpool	1929-31	332	—	(8) 2.91	£ 121-6-8 (9)	47.9
	Cardiff	1928	56	6.8	4.55	—	(11) 50.6
	Reading	1928	57	6.5	4.35	—	(11) 50.6
Germany	Large towns	1927-28	896	4.2	—	M. 3,325	43.8
Netherlands ...	Amsterdam	1934-35	75	4.04 (14)	—	Fl. 1,895	34.7
Belgium	Industrial centres	1928-29	809	4.4	3.21	Fr. 20,067 (15)	58.2
Austria (17) ...	Vienna	1931	73	3.32	—	Sch. 4,499	44.8
Czechoslovakia .	Prague and other industrial centres	1929-30	262	3.93	2.62	Kr. 16,700	56.0
Estonia	Tallinn	1925	230	4.1	2.91 (22)	M. 114,410	58.2
Poland	2 towns, industrial centre	1929	84	4.99	3.87	Zl. 3,467	56.2
Bulgaria	Towns	1927-28	93	4.2	3.02	Lev. 42,407	49.2
Italy	Bolzano	1929	43	5.9	4.91	—	—
	Milano	1929	52	4.9	4.06	—	—
	Salerno	1929	134	6.1	4.92	—	—
	Lecce	1929	36	6.4	5.39	—	—
	Cagliari	1933	11	6.0	4.88	—	—
	Sassari	1929	82	5.9	4.60	—	—
United States ..	Detroit	1929	100	4.5	3.27	\$ 1,720	32.3
Mexico	Mexico City	1934	275	—	4.10	\$ 1,142	56.4
Argentina (29) ..	Buenos Aires	1933	—	5	3.2	—	—
Palestine	Towns:						
	Ashkenazic Jews (30) ..	1930	25	5.04	3.89	—	—
	Sephardic Jews (31) ...	1930	18	5.88	4.57	—	—
	Yemenite Jews	1930	15	4.86	3.69	—	—
	Other oriental Jews ..	1930	16	5.25	4.03	—	—
CHINA	Peking	1926-27	48	4.58	3.38	\$ 203	71.2
	Shanghai	1927-28	230	4.76	3.78	\$ 390	57.2
Japan	10 industrial centres ...	1933-34	1,083	4.20	3.12	Yen 947	32.7
India	Bombay	1921-22	2,473	4.2	3.4	Rs 574-13-0	60.9
French Indo-							
China	Hanoi	1923	(36) 20	—	—	Piast. 120 (37)	75.8
Burma	Rangoon	1926-27	(38) 992	3.71	3.01	Rs 680-3-0	52.8

— (23) In addition 9.9 kilogrammes other forms of milk. — (24) Expenditure on meat and fish. — (25) In addition 5.8 litre 9.6 kilogrammes condensed and evaporated milk and 3.5 kilogrammes buttermilk. — (29) Figures refer to the consumption in and used for the construction of index-numbers. — (30) Jews chiefly from Central and Eastern Europe. — (31) Mediterranean at home. — (34) In addition about 1 kilogramme of fowl's and duck's blood. — (35) In addition a small fraction of a can of to have been spent. — (37) Alcoholic drinks not included. — (38) Burmese families only.

Foodstuffs in Urban Workers' Families according to Recent Family Budget Investigations.

Expenditure on animal foodstuffs as % of total food expenditure	Expenditure on meat as % of total food expenditure	Expenditure on fish as % of total food expenditure	Annual consumption per consumption unit					NOTES
			Meat	Fish	Whole milk	Cheese	Eggs	
			kg	kg	lit.	kg	number	
56.7	18.7	6.9	40.7	46.7 ⁽²⁾	152.5	8.1	137	(1) General remarks: The sign -- signifies that no data are available. -- Figures on expenditure and consumption, given in some investigations for a shorter period than a year, a week a month, etc., have in the table been calculated on an annual basis. -- In the expenditure on animal foodstuffs there is as a rule also included expenditure on fats of vegetable origin. -- When not otherwise stated, food expenditure includes expenditure on tea, coffee, cocoa, spices and drinks. -- In all cases where the quantities of milk and eggs are given in kilogrammes, they have in the table been converted into litres and numbers respectively by dividing the quantity of milk by 1.031 (the weight of 1 litre being about 1.031 gr.), and multiplying the quantity of eggs by 17.5 (the weight of 1 kg. of eggs being taken as equal to about 17.5 eggs). -- (2) In addition 31.3 litres skimmed milk and 11.3 litres other forms of milk. -- (3) In addition 7.8 litres skimmed milk. -- (4) As quantities for all the various kinds of meat are not to be found in the source, the figures for the total meat consumption are in part estimations made from data on expenditure and the price information given in the retail price statistics for similar products as those for which no quantity figures have been available. -- (5) In addition 1.9 litre skimmed milk and 8.9 litres other forms of milk. -- (6) In addition 11.1 litres skimmed milk and 23.6 litres other forms of milk. -- (7) In addition 20.9 litres skimmed milk. -- (8) Median number of equivalent adults. -- (9) Expenditure on alcoholic drinks not included. -- (10) Meat and fish. -- (11) Expenditure on beer and other alcoholic drinks not included. -- (12) Fish and game. -- (13) In addition 1.7 litre other forms of milk. -- (14) Data not yet published. -- (15) Refers to the food expenditure in the 116 families in which also the expenditure on items other than food was investigated. -- (16) In addition 7.3 kilogrammes buttermilk. -- (17) Figures on annual consumption refer to 32 families only. -- (18) Expenditure on bacon not included. -- (19) In addition 2.1 litres other forms of milk. -- (20) Expenditure on bacon included (bacon not included under meat in the source). -- (21) Excluding offals for which quantities are not given. -- (22) The figures refer to the 176 families in which also the expenditure on items other than food was investigated.
52.8	18.3	3.0	47.8	17.1 ⁽³⁾	233.8	6.1	226	
48.3	22.9	2.8 ⁽⁴⁾	73.6	—	89.8	5.4	216	
50.3	21.8	2.2 ⁽⁴⁾	60.1	—	103.3	5.0	164	
54.1	13.9	2.8	33.4	15.4 ⁽⁷⁾	297.9	1.1	59	
51.7 ⁽¹⁰⁾	28.5	—	—	—	—	—	—	
—	—	—	40.8 ⁽¹²⁾	8.5	53.4	—	—	
—	—	—	45.3 ⁽¹²⁾	6.1	97.5	—	—	
52.2	23.7	1.4	40.3	6.6 ⁽¹³⁾	148.1	4.8	152	
44.5	14.2	2.2 ⁽¹⁴⁾	—	—	—	—	—	
57.6	22.5	1.7	49.7	9.2 ⁽¹⁶⁾	142.7	5.5	199	
50.1 ⁽¹⁸⁾	23.8	1.1	84.9	4.1 ⁽¹⁹⁾	189.1	3.8	260	
50.4 ⁽²⁰⁾	21.8	0.5 ⁽²¹⁾	43.3	—	192.5	—	170	
45.6	18.7	7.2	40.9	50.0 ⁽²³⁾	184.9	0.1	8	
49.0 ⁽²⁴⁾	24.7	—	46.6	4.6 ⁽²⁵⁾	77.7	1.8	57	
36.0	15.8	1.6 ⁽²⁶⁾	34.7	4.0 ⁽²⁷⁾	20.7	6.4	72	
—	—	—	29.7	1.4	208.2	3.3	134	
—	—	—	42.9	4.0	99.5	7.3	235	
—	—	—	10.9	12.8	23.0	3.3	121	
—	—	—	5.6	10.2	13.8	3.7	51	
—	—	—	13.0	11.1	23.4	7.3	34	
—	—	—	22.1	13.3	63.7	8.4	128	
53.4	20.6	1.7	53.2	4.6 ⁽²⁸⁾	92.3	2.2	295	
37.9	14.7	0.6	48.2	0.9	122.9	1.7	90	
38.8	21.3	1.7	91.3	11.4	228.1	1.8	172	
—	—	—	21.7 ⁽³²⁾	8.8	64.4	3.9	329	(31) forms of milk. -- (26) In addition 3.1 fowls. -- (27) In addition 5.2 kilogrammes other forms of milk. -- (28) In addition family of five members (3.2 consumption units) considered, according to the results of the budget investigation, as typical Jews of Spanish origin. -- (32) Including some small quantity of tinned meat. -- (33) Refers only to families taking their meals milk powder. -- (36) Unmarried workers with an average monthly income of 10 piastres, the whole of which is here supposed
—	—	—	11.2 ⁽³²⁾	5.0	37.2	3.8	219	
—	—	—	12.1 ⁽³²⁾	3.2	41.8	3.3	219	
—	—	—	10.8 ⁽³²⁾	4.6	32.2	3.7	219	
3.2 ⁽³³⁾	3.1 ⁽³³⁾	0.0 ⁽³³⁾	2.3 ⁽³³⁾	0.3 ⁽³³⁾	0.0 ⁽³³⁾	0.0 ⁽³³⁾	0.5	
13.1	6.9	4.4 ⁽³⁴⁾	5.9	7.6 ⁽³⁵⁾	0.0	0.0	27	
14.4	2.8	9.0	—	—	—	—	—	
14.9	5.0	4.6	4.9	—	5.81	0.0	0.0	
19.2	11.0	6.8	—	—	—	—	—	
37.4	13.2	22.9	17.9	31.9	0.0	0.0	4	

other forms of milk. -- (26) In addition 3.1 fowls. -- (27) In addition 5.2 kilogrammes other forms of milk. -- (28) In addition family of five members (3.2 consumption units) considered, according to the results of the budget investigation, as typical Jews of Spanish origin. -- (32) Including some small quantity of tinned meat. -- (33) Refers only to families taking their meals milk powder. -- (36) Unmarried workers with an average monthly income of 10 piastres, the whole of which is here supposed

with the two nomad Arab tribes forming the object of the enquiry, the one wealthy and the other poor, the consumption reached only 18 and 9 grammes per day respectively, or 10 and 3 kg. per year. Although for the majority of the nomad or semi-nomad peoples here under discussion, wealth consists, for the greater part, of cattle, sheep, goats, camels and horses, meat is merely a quite occasional form of nourishment, and their manner of living is markedly vegetarian, the principal foodstuffs being cereals and other vegetable products, and in the second place milk and milk products. In the two Arab tribes quoted, whose manner of living may be considered as typical for the other nomad and semi-nomad peoples of North Africa and of the Near East, cereals alone supplied in the rich tribe about 60 per cent. and in the poor tribe about 80 per cent. of the calories, while the foodstuffs of animal origin supplied only 14.6 and 12.3 grammes of the total protein which actually amounted to 101 and 107 grammes.

A meat consumption similar to that of the Near East is to be found in the south of the North American continent—in Mexico (*) and in the small republics of Central America—and in South America among the numerous descendants, pure or mixed, of the former civilisations of the high tablelands of the Andes—in Colombia, Ecuador, Peru and Chile—among the majority of the negro populations of Africa, whether Bantu or Sudanese (10), etc. Again in the southern and south eastern parts of the Asiatic continent, the area inhabited by almost one half of the human race, it is found that the place of meat in the diet is, if possible, even less, and that for hundreds of millions of people it is of no importance whatever.

In India some importance attaches to meat among certain tribes quite in the north of the peninsula, but going southwards meat tends to disappear, as well as other foods of animal origin, and the nourishment of the people becomes entirely vegetarian (11). As shown in Table II, in 1921-22 even in a large town like Bombay the consumption of meat, for workers' families, did not exceed 5 kg. per annum and per unit of consumption. In Siam, an enquiry into family budgets made in 1930-31 among the agricultural population, showed that meat was eaten only once or twice a month (12), and in Burmah it is generally understood that the cultivator cannot pay for the luxury of eating meat more than once a week (13), although from Table II it appears that the position is better for the more highly paid classes of workers in Rangoon who are able to allow themselves a meat consumption of about 18 kg. per annum and per unit of consumption, a remarkably high quantity for a worker in the Far East.

The unimportance of meat as a food among the native population of Netherlands India will be seen from the fact that according to estimates made some years ago by the Central Office of Statistics at Batavia, the consumption,

(*) A consumption of meat such as shown by the budget enquiry of 1934 to exist among the workers in the city of Mexico—48 kg. per annum and per unit of consumption—is in no way representative for the consumption of the great mass of workers and of cultivators in Mexico.

per day and per head of native population, of beef (the chief kind of meat consumed, pork not being eaten for religious reasons) was scarcely 5 grammes, or less than 2 kg. per year (14). In China the situation is similar. In Peking, for example, as shown in Table II, the consumption of meat, according to a budget enquiry of 1926-27, among workers' families hardly amounted to 2.3 kg. per unit of consumption and per annum, while among the workers of Shanghai with their higher level of wages, a somewhat higher figure was shown by the budget enquiry of 1927-28, but still very small, *viz.*, 6 kg. per unit of consumption and per annum.

In Japan the calculations of Toda showed that in the course of the period 1917-24 only 6 grammes of meat were consumed per head and per day, or 2.2 kg. per annum. A little later, in 1925, Grey estimates the consumption of meat at about the same figure per unit of consumption, *viz.*, 7 grammes per day or 2.6 kg. per annum (15). The unimportance of meat in the diet of an urban worker in Japan appears from the fact that, according to a budget enquiry made in 1933-34, meat represented only 2.8 per cent. or 0.7 *yen*, of the yearly expenditure for nourishment. The enquiry supplies no data in regard to the quantitative consumption.

As an animal protein yielding food, fish with other water organisms is much more important than meat in the greater number of the countries just discussed in the south and south east of Asia, while milk and milk products—except among the peoples of the extreme north of India already mentioned above—have only a very small importance or none at all. On the other hand the consumption of milk, especially condensed milk, shows a steady increase in recent years in many of the towns of the Far East. Speaking generally, in the Far East animal protein constitutes only a very small proportion of the total of protein consumed. Thus a budget enquiry, made in 1932 and 1934 among the farming families of Central Java, shows that animal protein formed only from 2 to 10 per cent.—in many families not even 1 per cent—of the total protein (16); and from the two budget enquiries made in Peking and Shanghai referred to previously, it appears that among the workers' families taken into consideration in the enquiry, out of the total of protein consumed 1.7 and 6.2 per cent. respectively represent the protein of animal origin. It might also be added that a budget enquiry relating to more than a thousand farm households in Central China shows that one per cent. only of the total energy is derived from animal sources (17); in Japan, according to the study made by Toda, four per cent. only of the total supply of energy from the population come from food products of animal origin, *viz.* fish 2.9 per cent. meat and eggs 0.3 each and milk and milk products 0.1 per cent (18).

Leaving the question of the total consumption of meat in the different parts of the world a few observations may be made on the place occupied at the present time by the different kinds of meat in the dietary system of the various peoples. In the countries of Western civilisation, whether in Europe or elsewhere, as appears from Table I, beef and veal represent in general 40 to 50 per cent. of the total consumption. In Germany and in Romania the proportion is much lower, or about 30 per cent., while in Italy it is higher

(about 60 per cent.), and still higher in Argentina, where 90 per cent. approximately of the total consumption of meat is constituted by beef and veal. The place taken by pork in the diet seems to follow very similar lines, speaking generally. The proportion is exceptionally large in countries such as Denmark, the Netherlands, Poland, Sweden, the United States, where from 1930 to 1934 the percentages of pork in all the meat consumed were roughly 60 in each case. In Germany in the course of the same period, pork represented two thirds of the total consumption. It has little importance in Argentina (5 per cent. approximately), in Australia (about 9 per cent.) and in New Zealand (about 8 per cent.). From the figures of the table it appears that in the dietaries of the countries affected by Western civilisation, mutton occupies an important place only in Australia and in New Zealand (where from 1930 to 1934 about 40 per cent. of the total consumption was mutton), and among European countries in Great Britain, Norway and Romania, where during this same period the respective figures were 21.8, 16.3 and 16.0 per cent. In the other countries, as will be seen, the consumption of mutton at a maximum does not exceed 10 per cent. and in many cases only represents 1 to 2 per cent. There is, however, little doubt that in certain countries of Southern Europe, such as Portugal, Spain, Yugoslavia, Greece, Albania, Bulgaria, for which no statistics of meat consumption per capita are available, but where the conditions are particularly favourable to sheep raising on a large scale, the consumption of mutton (and of goat's flesh) is relatively important, and it should be observed also that the low figures for consumption of mutton in Italy (1.3 kg. per head and per annum, in 1930-34) are not all representative of the importance of this form of meat in the dietary in Southern Italy and in Sardinia. According to the enquiries relating to food consumption among the workers of Lecce, Salerno and Sassari whence are obtained the figures of Table II, mutton accounted respectively for 20, 30 and 50 per cent. of the total of meat consumed.

If a rapid survey be taken of the other civilised peoples of the world and of the primitive races, habits of consumption will be noted which, in virtue of religious practices and of customs, differ essentially from Western habits in regard to the kind of meat consumed. The 240 millions of Moslems in the world, who inhabit especially the north of Africa, the South-west of Asia, India and the East Indian Archipelago, do not eat pork, since they regard the pig, as do the orthodox Jews, as an unclean animal. The nomad and semi-nomad Moslems inhabiting these parts of the world, consume mutton and goat's flesh, and it is only among the farming populations established in India and in the Archipelago that beef is principally consumed. For the more than 240 millions of Hindus in India the pig is also taboo and so are cattle, which are the object of religious veneration. Although there is a larger number of head of cattle in India than in any other country—the estimate is about 160 millions—cattle are never killed for food, and they are employed only as draught animals and as milk yielders, so that they are allowed to live on such food as is available till the time of the natural death. With the Hindus, the meat eaten is mainly mutton or goat's flesh. Although

a Buddhist is forbidden to kill, this commandment is observed with varying degrees of strictness among the different nations and sects belonging to this religion, and in addition, the majority of Buddhists may eat meat of animals killed by other persons. This explains the fact that among the 300 millions of the followers of Buddha in China, Korea, Japan, Tibet, in Mongolia, in Indochina—the principal areas of expansion of this religion—all the kinds of meat already mentioned are eaten, although in very small quantities as shown above. Among the three principal kinds of meat, that most largely eaten in Japan and Burma seems to be beef, while in Southern China, Siam and Indo-China it is pork, and in Northern China, Tibet and Mongolia mutton. In conclusion among these few examples of the influence exercised by religion and custom over the character of the food consumption, it may be mentioned that with the Sudanese and the Bantus, who together occupy most of the southern two thirds of the African continent, the modest ration of meat usually consists of poultry or venison. With the Bantu people, even when there are great numbers of herds, cattle are never killed expressly for food, as they are regarded in the light of personal friends which one would shrink from killing or that are killed only as sacrifices on the occasion of births, marriages or deaths, and only on those occasions is beef eaten. The same ceremonial does not surround the slaughter of sheep and goats with the Bantu tribes, but as a rule they are not killed for ordinary household use, but are preferably kept as a sign of wealth or utilised for making presents to chiefs or to special friends (19).

Probability of an Increase in Meat Consumption in the Near Future.

From the survey just made it would appear that at the present time meat is to be considered, for at least three fourths of the population of the world, as an occasional factor only in the diet, and that, with a few rare and insignificant exceptions, meat is an important food only for some 200 to 300 million people in Europe as well as for the overseas countries peopled by emigrants from Europe. The question is now to be asked, whether an increase in the total consumption of meat in the world is to be anticipated in the near future and what is the probability that the production of meat will be adequate to this possible increase.

That an increase in and even a considerable addition to this production is likely, seems beyond doubt. It is certain, to mention only some of the more important factors tending to promote the production of meat, that there are to be expected in the future further important advances in the sphere of scientific breeding and feeding of domestic animals, in the control of the different diseases of these animals and especially in the science of plant selection and in other sciences connected with cultivation, advances which will render it practicable, even more than it has so far been, to transform crop products into meat and other foodstuffs of animal origin.

It is highly probable also that in a near future, provided at least that the general conditions of purchasing power among the masses do not become worse, a total increase in the demand for meat among the Western populations

will have to be counted on, even if the consumption of the more well-to-do classes has already reached saturation point and will not continue to rise but may possibly fall. All the factors, which in the course of the XIXth century effected so large an increase in meat consumption, remain active. Every day the proportion of the urban and industrial section of the population, the chief meat consuming section, increases, as does also the proportion of the adult age groups consuming more meat; compulsory military service continues to accustom every year fresh classes of young men to a consumption of meat which, for the majority of them, was previously quite abnormal. In consequence of a propaganda far more effective than before, the meat industry and trade act in favour of an increase in the consumption of this food; throughout the population in the upper classes as in the masses, consumption of meat is constantly associated with success, power, prosperity, etc.

Since the majority of these factors, acting in favour of an increase in the consumption of meat, are gaining effect every day also among the three fourths of the world's population, among whom the consumption of meat is at present very small or even nil, it must be expected that this consumption will increase too among them in the future. Among the primitive races of Africa, as well as with the civilised nations of the Far East, numerous proofs are met with that a development in this sense is in course. We may recall, for example, the meat rations, often of European type, distributed to coloured troops or to workers in the large mining enterprises in Africa, or the large meat consumption, according to budget enquiries, among the negroes of South Africa, removed from their primitive conditions of life in their tribes to become town dwellers (20), or again the increasing production of meat in Japan and the highly significant fact that in Tokio to-day there are to be found more than 3,000 butchers' stalls, where 15 years ago there were only three or four (21).

L.

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LIVE STOCK INSURANCE IN GERMANY (*continued*)

SUMMARY: III. Public live stock insurance. — IV. The reinsurance of small local societies.

III. — PUBLIC LIVE STOCK INSURANCE.

In 1935 four public institutions might be noted as operating live stock insurance: the Bavarian Public Animal Insurance Institute, the Public Live Stock Insurance Institute of Thuringia, the *Niederschlesische Provinzial Feuer-societät* and the *Oberschlesische Provinzial Feuersocietät* (1).

(A) The Bavarian Public Animal Insurance Institute (*Bayrische Landes-Tierversicherungsanstalt*) (2) was founded in virtue of the Law of 11 May 1896 with the title of the Bavarian Institute of Live Stock Insurance (*Landes-Viehversicherungsanstalt*) and on the following bases:

(a) It is in the first place a public institution of mutual type the administration of which is vested in the Bavarian Chamber of Insurance;

(b) the object of this Institute is insurance against losses arising from the death or forced slaughter of cattle and goats, and against losses due to the fact that the meat of a slaughter beast has been officially declared either wholly or partially unfit for consumption by reason of a defect discovered after sale.

(c) This Institute is constituted by the local insurance societies joining it of their own accord, on condition of accepting the model rules established by the administration of the Institute;

(d) The local societies are founded on the principle of voluntary and mutual participation; their organisation and their relations with insured persons are governed by the model rules;

(e) the Institute undertakes the covering of half the losses for which compensation must be paid by the local societies in virtue of the model rules. These funds are supplied, in so far as other means are not available, by means of contributions paid in by all the local societies belonging to the Institute, in the proportion of the sums insured by them. The Institute thus acts as a reinsuring body for the local societies.

(f) to the Institute is assigned not only an annual State subsidy intended as a contribution to the payment of compensation claims each year, but also a sum which was paid on one occasion only by the State and earmarked for the reserve fund of the Institute.

The fundamental law of 1896 was amended several times. Only the more important modifications are noted here.

(1) NEUMANN'S JAHRBUCH DER PRIVATEN UND ÖFFENTLICH RECHTLICHEN VERSICHERUNG IM DEUTSCHEN REICH, 1936, p. XXX.

(2) FR. SEITZ: Die öffentliche Tierversicherung in Bayern in the *Vierteljahresshefte für genossenschaftliche Tierversicherung*.

In virtue of a law dated 6 July 1908, insurance was extended to all farm animals with the exception of horses, which, as will be seen, are insured separately.

By the law dated 2 November 1912 local societies were admitted to membership of the Institute on condition that they would accept the modifications permitted by the administration of the Institute.

The most important amendment made to this law relates to the payment of compensation for losses. Up to that time, the half of the compensation paid was at the charge of the local societies, while the other half was paid by the Institute. The consequence of this strict method of division was that the local societies which gave less attention to the management of the insurance became a burden on the Institute and on the other better managed societies which often for that very reason were led to quit the Institute. In consequence, beginning from 1912, the Institute undertook the total amount of the losses, apart from dividing out at the end of the financial year the total of the compensation payments, the administration and other expenses between the local societies on the basis of the risks insured by each society and in conformity with the principles of division approved by the Committee representing the insured persons. As a rule, the basis of this division is the average over five years of the losses chargeable to each local society. In this way, the contributions of the local societies are in general determined by the relation between the average of the compensation payments made during the last five years and the average of the sums insured over the same period.

The result of these rules, which affect each society in proportion to the risks undertaken and by which contributions are levied on the local societies in varying degree according to the extent of the average losses insured by them, is to give each society a greater measure of influence on the establishment of their contributions. Local societies supervising the stock breeding carried out by their members and endeavouring so far as possible to avoid losses and to obtain good net returns may count on their contributions being reckoned at a low rate; the reverse is true for the societies which follow a different course of action.

In the exceptional cases in which losses occur that cannot in justice be debited to local societies, it is possible to establish a fair compensation by utilising the State subsidy.

Up to the time of the amending law little attention had been paid to the utilisation of the meat, but from that time very special attention was given to the matter as the sums accruing from such utilisation are employed to the profit of each society.

The law in question also established that the contributions of members must in the future be calculated on the basis of the degree of risk of the various kinds of animals.

The contributions are collected by the methods employed for the collection of taxes.

On 11 October 1919 the rules of insurance of slaughter stock were modified and will be described later.

On 16 August 1923 the Government was empowered to amalgamate with the Bavarian Live Stock Insurance Institute (*Landes-Viehversicherungsanstalt*)

the Bavarian Institute for Insurance of Horses; this was done on 1 November 1923, and the Institute took the title of the Bavarian Animal Insurance Institute (*Landes-Tierversicherungsanstalt*). At the same time the law on the insurance of horses was repealed, and the insurance of all the kinds of animals was thenceforward regulated by the law on animal insurance (former law on insurance of live stock).

On 22 January 1924 the Chamber of Insurance was authorised to regulate the collection of contributions in a manner differing from that prescribed by the law. At the same time the Chamber was also authorised to declare that the outstanding contributions could be collected by distraint and to establish proceedings for forced collection similar to those prescribed for the collection of taxes in arrears.

The Bavarian Institute for Insurance of Horses referred to above was founded in virtue of the Law of 14 April 1900. This organisation had to be administered also by the Chamber of Insurance and in accordance with the principles regulating the Bavarian Institute for Live Stock Insurance, but separately. This institute was based on mutuality principles and on a local constitution. It also dealt with reinsurance which was operated by the societies taken as a whole. The purpose of these societies was to insure their members against losses due to the death of horses or their slaughter in consequence of permanent total disablement. At the beginning, the Institute assumed responsibility for half of the compensation payments while the other half was at the charge of the local societies. During the years which followed its foundation, several amendments were made to the law, similar in scope with those relating to the Institute for Live Stock Insurance.

As already stated, on 1 November 1923, the special Institute for Insurance of Horses was amalgamated with that for insurance of live stock, and the laws relating to it were repealed.

As regards insurance of slaughter stock, in accordance with the law of 11 May 1896 on the Bavarian Institute of Live Stock Insurance, the opportunity was offered to stock breeders only of insuring themselves against losses due to the declaration by the sanitary inspectors that the meat of slaughter cattle was unfit for human consumption. Later this law was found to be longer adequate.

On 16 June 1916, following on the introduction of the compulsory organisation of the meat market (*Fleischzwangswirtschaft*), on which the sole purchaser had become the Bavarian Office for Meat Supply, the Bavarian Federation of Slaughter Stock Insurance (*Bayrischer Schlachtversicherungsverband*) was founded, attached to the Bavarian Live Stock Insurance Institute.

When in 1919 the meat supply was reorganised, insurance of slaughter stock was also placed under the same legal regulations. By the law of 1 October 1919, to the law on live stock insurance there was added an article by which the administration of the Institute is empowered, for special insurance requirements, to establish general conditions of insurance independently of the rules established by the law on live stock insurance. At the same time the Ministry of Internal Affairs was empowered to introduce compulsory insurance of slaughter stock, which was done by an Order of 24 September 1920.

In amendment of the law of 1919 which confined this insurance to butchers only, the law of 1920 extended the obligation to stock owners and also to dealers in slaughter stock.

In addition, there was linked with the Bavarian Animal Insurance Institute also the Bavarian Federation for Animal Insurance, the object of which was insurance against live stock mortality of those stock owners who were unable to insure with any local insurance society.

The insurance against live stock mortality introduced from 1 November 1913 and the insurance against mortality of horses dating from 4 April 1916 differ very little from the same insurance as operated by the local insurance societies. It is for this reason that the rules of these societies are essentially similar to those of the Federation.

The activity of this institution is not confined to animal mortality insurance and is extended to other branches of insurance falling outside the scope of this article.

It may be of interest to examine the Law of 7 December 1933 which summarises the essential organisation of the Bavarian Animal Insurance Institute.

This Institute is constituted as a public body corporate. It forms part, with other institutions, of the Bavarian Chamber of Insurance which administers separately the different organisations belonging to it, and represents them in legal and extra-legal proceedings.

The object of this Institute, which is based on the principle of mutuality, is insurance against mortality of animals, and also the insurance of slaughter animals.

The insurance is operated by the local societies affiliated to the Institute and by the Bavarian Animal Insurance Federation which is linked with the Institute. The policy holders are the members of the affiliated societies. These societies and the Federation are also public corporate bodies, and are based on the principles of mutuality and liberty of action.

Their organisation and their relations with the insured persons are regulated by the rules of the Bavarian Animal Insurance Institute. The administrative area of the local societies is determined by the Chamber of Insurance.

Slaughter stock insurance applies to losses arising from the death of the animal intended for slaughter or from the official declaration at the time of the inspection of animals slaughtered for meat, when the meat is wholly or partially unfit for human consumption, or even when it is so fit under certain conditions or when it has lost some part of its value. All cattle, pigs, goats and sheep intended for slaughter which are subject to the health inspection in virtue of the law of the Reich of 15 January 1900, are covered by the reinsurance of slaughter stock. Animals not included are only porkers less than 50 lb. in weight and sheep and goats under three months. Declaration is obligatory for the butcher, and optional only for the owner of the animal.

For each individual case penalties can be imposed by the Chamber of Insurance, up to ten times the amount of the unpaid insurance contributions, in the case of non-observance of the obligation to take out insurance, and

up to three times the same amount if it is a case of non-observance of the regulations for carrying out the law.

The Bavarian Animal Insurance Institute receives each year from the State a subsidy the total of which is fixed by budget and which is especially assigned to insurance against live stock mortality.

Control of the public insurance institutions attached to the Chamber of Insurance is exercised by the Bavarian Ministry of Internal Affairs.

The other provisions relating to the Institute of Animal Insurance as well as to the other institutions attached to the Chamber of Insurance arise out of the rules and general conditions of insurance which are drawn up and modified by the President of the Chamber of Insurance with the consent of the authority controlling the institutions in question.

Provisions are found in the rules relating to the formation of sections, the constitution and utilisation of reserve funds, investment and employment of the financial means of the Institutions belonging to the Chamber of Insurance, the right of insurance, the beginning, end, extent and total of the insurance, the objects that can be insured, fixation of losses, determination, payment and loss of compensation, declaration of claims, contributions and return of contributions.

The right of distraint belongs, within the limit of their competence, to the institutions attached to the Chamber of Insurance with the exception of the Bavarian Federation of Insurance. The distraining clause can be applied either to credit, contributions and other rights originating in the relation of insurance, or to interest payable on contributions in arrears and to the costs of collection. The procedure may be the same as is applied in the collection of taxes in arrears.

In respect of live stock mortality insurance, apart from that effected against mortality of horses, at the end of the year 1934-35 there were 438 local societies with 17,153 members and 43,712 insured animals, and an assured capital of about 13,500,000 RM. (1).

There have been 2,153 claims with 281,393 net compensation payments. In the insurance against mortality of horses the following figures were registered: 441 local societies, with 32,552 members, effected insurance for 63,373 horses for a capital of 46,516,900 RM.

The net compensation payments amounted to 1,747,532 RM. on 4,043 horses. The number of insured slaughter stock was 3,286,951. Complete losses were registered of 31,960 animals for a sum of 1,847,939 RM.; partial losses are not included in this figure.

The Bavarian Federation of Animal Insurance which effects, among other forms, insurance against animal mortality insured 2,346 animals in 778 local groups for a capital of 965,280 RM. and 846 animals in 23 institutions of public utility for a value of 338,740 RM. (2).

(1) REPORT OF THE BAVARIAN PUBLIC INSTITUTE FOR ANIMAL INSURANCE for the year 1934-35.

(2) *Zeitschrift für genossenschaftliche Tierversicherung*, Heft 6, 2 Jahrgang, June 1930.

(B). In the Public Live Stock Insurance Institute of Thuringia, this state possess a public institute of live stock insurance which operates both insurance of slaughter stock and insurance against contagious stock diseases. Reinsurance of the local live stock insurance societies which was effected by the Institute for a number of years is at present in the hands of the Institute for the reinsurance of local live stock insurance societies at Berlin.

The Institute was founded in 1919 in virtue of an agreement made between the former divisions of Thuringia.

On 19 December 1922 this agreement was replaced by a law which lay down the principle that the object of this Institute is to be the general interest to the exclusion of any lucrative interest. Besides the branches already named, the Institute was empowered to extend its activity to other branches of insurance and to institutions the object of which is to combat contagious diseases of stock.

In respect of slaughter stock insurance, the law in question, which has introduced several modifications into the agreement referred to, laid down that compensation is only due in the case where losses relating to slaughter stock compulsorily insured are attributable to the rejection of the meat at the time of the obligatory inspection at the slaughterhouse. Losses occurring during the transport are not covered any more than the costs of slaughtering, inspection and accessory expenses.

Cattle the meat of which is intended to be used for consumption by the owner's family only are not brought under compulsory insurance but they can be insured.

Animals excluded from the ordinary insurance of slaughter cattle and in particular badly nourished although not obviously ailing animals, animals obviously ailing, but well nourished and not feverish are covered by a special form of insurance at higher rates of premium.

The declaration relative to animals insured compulsorily must be made at the place of slaughter. The declaration need be made at the place of sojourn of the animal only if the seller requires it, or for animals intended for export from Thuringia.

As regards the section of insurance against contagious diseases of stock, compensation is given in accordance with the law of 1922 in the case of:

(a) animals slaughtered by order of the sanitary authority or those which, after the issuing of the order, have succumbed to the disease which was the occasion of the order. The compensation amounts to the total of ordinary value of the animal if the conditions giving rise to the order have not been realised, and to three fourths of the ordinary value of the animal in the case of death, or even to four fifths in the case of contagious pulmonary disease, rabies, foot and mouth disease or tuberculosis, if the conditions which gave rise to the order have been realised;

(b) animals which have died after the declaration, if the conditions necessitating slaughter were present.

The compensation amounts to three fourths of the ordinary value for glanders and to four fifths for contagious pulmonary disease;

(c) animals in the case of which death may be presumed to have been the consequence of an inoculation ordered by the authority.

In this case the compensation is always equal to the whole ordinary value.

(d) animals which have died from anthrax, symptomatic anthrax, haemorrhagic septicaemia of cattle, rabies, etc.; or even after the death of which the presence of one such disease was ascertained. Compensation amounts to four fifths of the ordinary value;

(e) cattle and goats which have died in consequence of foot and mouth disease; or even after the death of which the presence of one of these diseases has been ascertained. Compensation is reckoned at four fifths of the ordinary value;

(f) cattle, which, without order from the authority, have been slaughtered in consequence of tuberculosis or as suspected of suffering from the disease.

An essential condition for payment of compensation is that the cattle should have, for at least three months, belonged to a herd subject to the optional procedure, as recognised by the State, for control of tuberculosis.

In this case the compensation amounts to three fourths of the ordinary value, but cannot exceed 400 RM.

There are calculated in the compensation payments:

(a) the sums payable by private insurers, *viz.*, three fourths of the total amount in the case of glanders and four fifths in the case of anthrax, symptomatic anthrax, haemorrhagic septicaemia of cattle, contagious pulmonary disease, rabies, foot and mouth disease and tuberculosis (slaughter ordered by the authority). In other cases the whole of the ordinary value is paid.

(b) the value of the parts of the slaughtered animal which remain at the disposal of the owner in accordance with the sanitary order.

In respect of the section of the Institute dealing with reinsurance, it should be noted that, according to the agreement mentioned above, the owners of animals for which insurance against live stock mortality is compulsory had to form local societies. In their turn these societies were expected to form a reinsurance federation. This obligatory form could not however be continued and was replaced by an optional reinsurance on a system of balancing the premiums.

A first organisation known as the Reinsurance Federation of the Thuringian Live Stock Insurance Institute remained in vigour up to the time of the inflation, after which it was dissolved and replaced by the Thuringian Federation of Local Live Stock Societies which was an institution designed to serve the general interest rather than to make profits. Its functions were to represent, in a general way and in face of the authorities, the small local societies attached to it, to give advice to these societies and to assist them, and, in order to develop the movement, to found new societies and especially to operate reinsurance.

As already stated, from 1 April 1935 the functions of this Federation were transferred to the Institute for Reinsurance of Local Live Stock Societies at Berlin; this latter Institute was founded by the Corporation of Agriculture of the Reich and some account of it will be given later.

During the financial years 1934 and 1935 the number of animals insured under the insurance of slaughter stock was 702,161 including: 50,234 cows, 18,087 bullocks, 40,229 young bullocks, 147,889 calves and 445,722 pigs, with a total of 1,127,722 RM. in contributions thus distributed: cattle 655,762 RM. calves 66,550 RM., pigs 405,375 RM.

In respect of losses there have been registered 5,709 total losses and 40,898 partial losses thus distributed:

cattle	2,532 total losses
	21,826 partial losses
calves	598 total losses
	1,193 partial losses
pigs	2,579 total losses
	17,879 partial losses

In respect of insurance against contagious diseases of stock, in the same financial years the funds available for the section amounted to 61,534 RM. for animals with undivided hoof and 378,116 RM. for cattle.

The losses registered included one animal with undivided hoof attacked with anthrax with 560 RM. paid in compensation and 19 cattle with 4,308 RM., 4 cattle attacked by symptomatic anthrax with 725 RM. paid in compensation and 70 cattle attacked by tuberculosis of the udder with 5,751 RM. paid in compensation.

Under the optional procedure for control of tuberculosis 2,254 animals have been slaughtered, carrying a total compensation of 238,697 RM. (1).

(C and D). — The other two public insurance institutions given in NEUMANN'S JAHRBUCH of 1936 are:

the *Niederschlesische Provinzial-Feuersozietät*, Breslau, founded in 1927 and originating in the division of the *Schlesische Feuersozietät*, founded in 1742, into the *Niederschlesische Provinzial Feuersozietät* at Breslau and the *Oberschlesische Provinzial Feuersozietät* at Ratisbon, in consequence of the decree of the Prussian Ministry (*Staatministerium*, 31 December 1926).

This society in 1934 insured risks to total of 10,812,000 RM. for 409,322 premiums (apart from premiums transferred to reinsurance) and with 273,303 compensation payments;

the *Oberschlesische Provinzial-Feuersozietät* at Ratisbon, founded in 1927, which has insured during 1934 a capital of 3,087,530 RM. (2).

IV. — THE REINSURANCE OF SMALL LOCAL SOCIETIES.

Reinsurance of live stock risks is operated in Germany by private societies and by federations. This latter form is by far the most important in relation to the small local insurance societies.

(1) REPORT OF THE PUBLIC LIVE STOCK INSURANCE INSTITUTE OF THURINGIA, year 1934-35.

(2) NEUMANN'S JAHRBUCH already quoted pp. 629 and 660.

This section of the article will be devoted to the federations existing in Germany in 1935.

The organisation in Bavaria of the reinsurance of the small local societies has already been mentioned in connection with public insurance.

The particulars in regard to the three other federative organisations of reinsurance are as follows (1).

(A) The Baden Insurance Federation (*Versicherungsverband*) which was founded in virtue of the law of 26 June 1890 limits reinsurance to the local societies for cattle insurance.

This Federation at first made itself responsible for three fourths of the losses and one fourth only was at the charges of the federated societies. At that time an exaggerated value was usually assigned to the insured animals and the very heavy claims fell on the insured owners as a whole. Owing to this and in spite of large State subsidies, very high contributions were required by the Federation.

The unsatisfactory utilisation of the carcasses of the animals slaughtered added also to the cost of the insurance.

These drawbacks led to a reform. On 1 July 1898 it was decided by an amendment to the law that the losses should be in future shared equally between the societies and the Federation. With a view to reducing the charges to be met by the societies a limit of compensation was established beyond which the State intervened with assistance from its funds. This limit was fixed at 0.20 RM. for each 100 RM. of insured value. In the case where, in consequence of an epidemic, a local society had to pay extraordinary compensation, authority was given by the Ministry to reduce the federal contributions by one half. The sums required for payment of compensation by the local societies and their administrative costs are supplied by local contributions the amount of which varies according to the extent of the sums necessary. In consequence these contributions are subject to fluctuations of varying extent.

The administration expenses of the Federation are met by the State except for the share in the compensation taken by the local society on the basis of 0.20 RM. per cent. In other words, these costs are not borne by the local societies.

The compensation payments which have to be paid by the local societies amount to seven tenths of the ordinary value resulting from the survey in the case of animals that have died naturally and eight tenths in the case of slaughtered animals.

The various causes which lead to reduction or complete suppression of the compensation will not be discussed here.

Membership of the Federation is obligatory for all the societies, whether of old standing or new. Only the former type can be released from this obligation.

(1) BEINZGER W. Die Tierlebensversicherung durch kleiner Vereine. Leipzig u. Berlin, 1936. (*Die Praxis der Versicherungswirtschaft*, Heft 16)

Besides its function of reinsurance, the Federation has also to control the activity of the societies belonging to it, especially in respect of the valuation of the insured animals, the attention to be given to ailing or wounded animals and the utilisation of the animals and their carcasses.

In all other respects membership of the Federation in no way limits the independence of the societies. In particular the administration of the Federation has no power to modify any compensation payments regularly recognised by the local societies nor to oppose the granting, the refusal or the reduction of payments as fixed by the societies. In consequence the owners of insured animals receive the compensation due without taking account of the reasons which might be opposed to the payment or to the valuation of the compensation by the administration of the Federation.

The interests of the Federation are safeguarded by the fact that it can refuse either wholly or in part the payments of the half of the compensation which is at the charge of the Federation.

(B) The Saxon Public Live Stock Insurance Institute (*Anstalt für staatliche Viehversicherung*) was founded in 1909 by order of the Ministry of Internal Affairs, according to the principle of free mutual insurance; it grants reinsurance to local societies for live stock insurance which in their rules and their policies observe at least a minimum of the requirements established by the Institute.

The reinsurance consists in half the compensation charges and half of the contributions to veterinary expenses. The sums in question are divided at the end of the financial year of the Institute between the local societies in proportion to the ratio between the losses incurred by each of them and the total sum insured by the local societies. Costs of administration paid by the Institute are divided in proportion to the ratio between the sums insured by each society and the total insured by the local societies as a whole.

The Institute has control over the management of the business of the societies belonging to it without prejudice to the legislative provisions of the Reich relating to the control of the insurance societies.

With the establishment of the Corporation of Agriculture of the Reich (*Reichsnährstand*) and the consequent winding up of a number of agricultural organisations, several reinsurance institutions disappeared.

(C) In the place of these the Corporation of Agriculture has formed a share company, the Institute for Reinsurance of Local Live Stock Insurance Societies (*Anstalt für Rückversicherung örtlicher Tierversicherungsvereine*), which has absorbed the following reinsurance federations:

(a) Live Stock Insurance of the Agricultural Corporation (*Landesbauernschaft des Sachse-Anhalt*),

(b) the Animal Insurance Office of the Agricultural Corporation of East Prussia,

(c) the Federation of Live Stock Insurance of the Agricultural Corporation of the Rhine province,

(d) the Federation of the Local Live Stock Insurance Societies of the Agricultural Corporation of Electoral Hesse, and finally

(e) the Thuringian Federation of Live Stock Insurance of which some account was given in connection with public insurance in Thuringia.

The reinsurance organisations in Saxony, Bavaria, and in the State of Baden, on the other hand, still continue to exist.

The Institute for Reinsurance, which by its rules is not conducted for profit but solely in the general interest, has headquarters in Berlin and was founded with a capital of 400,000 RM, belonging to the Reich Corporation of Agriculture (*Reichsnährstand*).

The expenses of this institution are paid in advance by the local societies reinsured under reserve of supplementary payments.

In the event of the dissolution of this Institute, its owned capital is to return to the *Reichsnährstand* which must utilise it in the interest of the local live stock insurance societies.

A choice between several methods of reinsurance is open to the societies or others seeking reinsurance. The general principle of the practice of reinsurance is the assumption of liability for two thirds of the sum required for the net compensation payments so far as it is not covered by the members' contributions.

In the case of reinsurance of local societies of insurance of horses and bulls also takes a share of the direct risk.

The benefits extend also to the waiving of the supplementary payment.

F. ARCOLEO.

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[Without pretending to provide an exhaustive description and economic history of the world cotton industry the author of this interesting book has touched on many present day problems of cotton production, the trend of the cotton market, the competition between the various cotton-producing countries, the determination of prices, etc.

The author is concerned less with cotton as a commodity in world trade than with the cotton-planter himself as a social class in the community, with his family life and level of culture, with his financial resources, and such things as these, of which he appears to have a wide knowledge.

While being admirably suited to provide a general introductory description of the cotton economy this book can be profitably consulted by the cotton expert. It is moreover written in an attractive and witty style].

M. T.

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